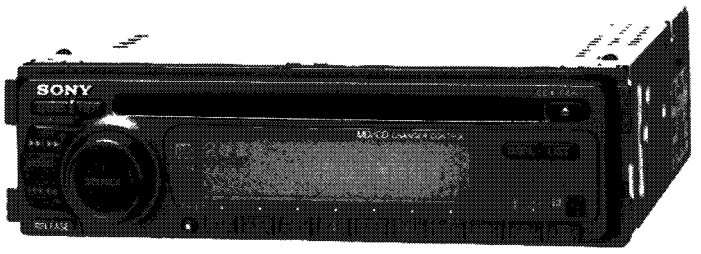
CDX-C660

SERVICE MANUAL

US Model



Model Name Using Similar Mechanism	NEW
CD Drive Mechanism Type	MG-333W-121
Optical Pick-up Name	KSS-520A

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
15 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1 % total harmonic distortion.

CD player section

System	Compact disc digital audio system
Signal-to-noise ratio	93 dB
Frequency response	10 - 20,000 Hz
Wow and flutter	Below measurable limit
Laser Diode Properties	
Material	GaAlAs
Wavelength	780 nm
Emission Duration	Continuous
Laser output power	Less than 44 6 μW*

* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block*

Tuner section

FM

Tuning range	87 5 - 107 9 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10 7 MHz
Usable sensitivity	10 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	62 dB (stereo), 65 dB (mono)
Harmonic distortion at 1 kHz	0 9% (stereo), 0 5% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 - 15,000 Hz
Capture ratio	2 dB

AM

Tuning range	530 - 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10 71 MHz/450 kHz
Sensitivity	30 μV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 - 8 ohms
Maximum power output	40 W × 4 (at 4 ohms)

– Continued on next page –

FM/AM COMPACT DISC PLAYER

MICROFILM

992557111

SONY®

General

Outputs	Line outputs (2) Power antenna relay control lead Power amplifier control lead
Tone controls	Bass ±10 dB at 100 Hz Treble ±10 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx 188 × 58 × 177 mm (7 1/2 × 2 3/8 × 7 in) (w/h/d)
Mounting dimension	Approx 178 × 50 × 154 mm (7 1/8 × 2 × 6 1/8 in) (w/h/d)
Mass	Approx 1.5 kg (3 lb 4.9 oz)
Supplied accessories	Rotary remote (RM-X2S) (1) Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

SERVICE NOTE

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

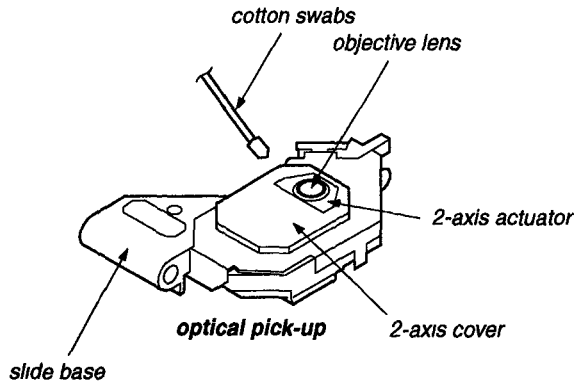
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

NOTES ON PICK-UP FLEXIBLE BOARD

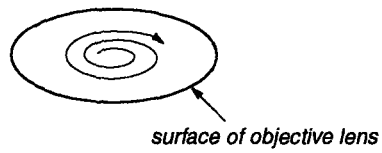
The pick-up flexible board in this set is secured to the optical pick-up with an adhesive tape. Once the tape is removed, an adhering force becomes weak, and it cannot be reused.

Therefore, if the optical pick-up is replaced, replace also the pick-up flexible board with a new one.

NOTES ON CLEANING THE OBJECTIVE LENS



Apply CD lens cleaner B-4 (Part No.:J-2501-000-A) to cotton swabs (narrow type) (Part No.:J-2501-023-A) to be lightly wet. Use a force (about 5 g (0.18 oz)) to make the objective lens in contact with the bottom lightly, and clean the lens by spirals as following below. Replace the cotton swab and repeat this cleaning two or three times.



Notes:

Do not force to push the objective lens. Otherwise, the plate spring supporting the objective lens will be bent, causing a deteriorated RF waveform.

Never touch anything other than the objective lens. Otherwise, a significant deterioration occurs in the RF waveform.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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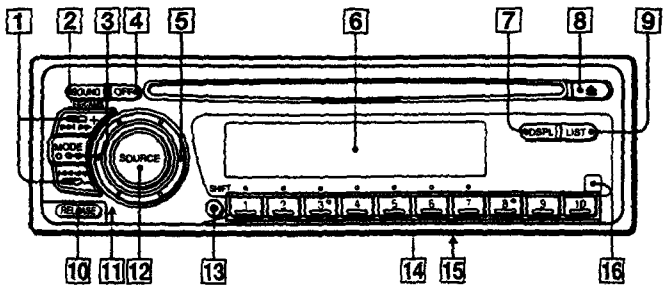
Location of controls



Refer to the pages for details.

1 **SEEK/AMS (seek/Automatic Music Sensor/manual search) button** 6, 7, 8, 9, 10, 14, 15, 16, 17, 19

2 ***SOUND* button** 13

3 **MODE (band/changer select) button** 9, 10, 14, 16, 18

4 **OFF button** 4, 5

5 **Dial (volume/bass/treble/balance/fader control)** 5, 10, 18

6 **Display window**

7 **DSPL (display mode change) button** 5, 10, 11, 14, 18, 19

8 **⏏ (eject) button** 5

9 **LIST button**
Disc Memo 18
List-up 11, 18
Station memo 10, 11

10 **RELEASE (front panel release) button** 4, 21

11 **Reset button (located on the front side of the unit behind by the front panel)** 4

12 **SOURCE (source select) button** 5, 9, 10, 14, 16, 18

13 **SHIFT button**
PLAY MODE 6, 7, 8, 9, 10, 15, 16, 17, 19
REP 6, 15
SET UP 5, 13, 14
SHUF 6, 15

14 ***During radio reception:***
Number buttons 9, 10
During CD/MD playback:
Direct disc selection buttons 15

15 **POWER SELECT switch (located on the bottom of the unit)**
See "POWER SELECT Switch" in the Installation/Connections manual.

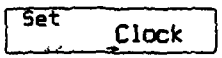
16 **Receptor for the optional wireless remote**

Setting the clock

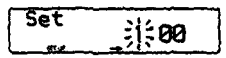
The clock uses a 12-hour digital indication.

Example: Set the clock to 10:08

1 Press (SHIFT), then press (2) (SET UP).

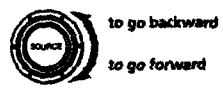


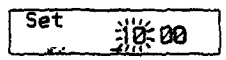
❶ Press (4) (→).



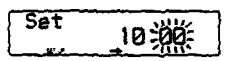
The hour digit flashes

❷ Set the hour.



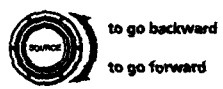


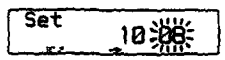
❸ Press (4) (→).



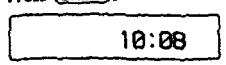
The minute digits flash.

❹ Set the minute.





2 Press (SHIFT).



The clock starts

3 Press (SHIFT).
After the mode setting is complete, the display goes back to normal playback mode

Note
If the POWER SELECT switch on the bottom of the unit is set to the ❶ position, turn the power on first, then set the clock

CD Player

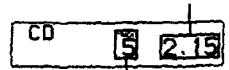
Listening to a CD

Simply insert the CD.
Playback starts automatically.

Labelled side up

If a CD is already inserted, press (SOURCE) repeatedly until "CD" appears.

Elapsed playing time



Track number

Note
To play back an 8 cm CD, use the optional Sony compact disc single adapter (CSA-8)

To	Press
Stop playback	⏏ or (OFF)
Eject the CD	⏏

Changing the displayed item

Each time you press (DSPL), the item changes as follows.

Elapsed playback time ↔ Clock

This section extracted from instruction manual.

Locating a specific track
— Automatic Music Sensor (AMS)

During playback, press either side of (SEEK/AMS) momentarily.

To locate succeeding tracks

To locate preceding tracks

Locating a specific point in a track
— Manual Search

During playback, press and hold either side of (SEEK/AMS). Release the button when you have found the desired point.

To search forward

To search backward

Note

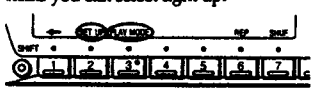
If "└┴┴┴" or "┌┬┬┬" appears in the display, that means you have reached the beginning or the end of the disc and you cannot go any further

Playing a CD in various modes

You can play CDs in various modes:
- Intro (Intro Scan) lets you play the first 10 seconds of all the tracks.
- Repeat (Repeat Play) repeats the current track.
- Shuf (Shuffle Play) plays all the tracks in random order.

Searching for the desired track
— Intro scan

1 Press (SHIFT).
Every time you press (SHIFT), only the items you can select light up.



2 Press (3) (PLAY MODE) repeatedly until "Intro" appears.
Each time you press (3) (PLAY MODE), the item changes as follows

Intro ⟷ PGM

3 Press (4) (→) to select "Intro on."

Intro Scan starts.

4 Press (SHIFT).

To go back to normal playback mode, select "Intro off" in step 3 above

Playing tracks repeatedly
— Repeat Play

1 During playback, press (SHIFT).

2 Press (6) (REP) repeatedly until "Repeat 1" appears.

Repeat Play starts.

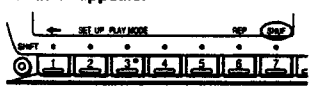
3 Press (SHIFT).

To go back to normal playback mode, select "Repeat off" in step 2 above.

Playing tracks in random order
— Shuffle Play

1 During playback, press (SHIFT).

2 Press (7) (SHUF) repeatedly until "Shuf 1" appears.



Shuffle Play starts.

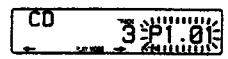
3 Press (SHIFT).

To go back to normal playback mode, select "Shuf off" in step 2 above.

Creating a program
— CD Program Memory

You can play the tracks in the order you want by making your own program. You can make two programs: Program 1 and Program 2. You can select up to 12 tracks for each program. You can store the programs in memory.

1 Press (SHIFT), then press (3) (PLAY MODE) for two seconds.

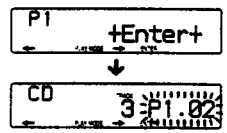


"P 1" shows Program 1 is selected.

To select Program 2, press (4) (→) repeatedly until "P 2" appears

2 Press either side of (SEEK/AMS) to select the track you want.

3 Press (5) (ENTER) momentarily.



4 To continue entering tracks, repeat steps 2 and 3.

5 When you finish selecting tracks, press (3) (PLAY MODE) for two seconds.

6 Press (SHIFT).

Notes

- *"*Wait*" appears in the display while the unit is reading the data.*
- *"*Mem Full*" appears in the display when you try to enter more than 12 tracks into a program*

Playing the stored program

You can select:
- PGM 1 to play Program 1.
- PGM 2 to play Program 2.
- PGM 1+2 to play Programs 1 and 2

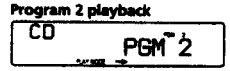
1 Press (SHIFT)

2 Press (3) (PLAY MODE) repeatedly until "PGM" appears.

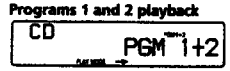
3 Press (4) (→) repeatedly until the desired program appears.

Program 1 playback

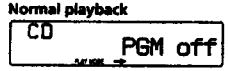
Program 2 playback



Programs 1 and 2 playback



Normal playback



Program Play starts.

4 Press (SHIFT).

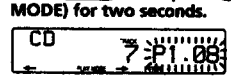
To go back to normal playback mode, select "PGM off" in step 3 above

Note

"NO Data" appears in the display if no track is stored in the program

Erasing an entire program

1 Press (SHIFT), then press (3) (PLAY MODE) for two seconds.

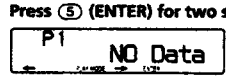


"P 1" shows Program 1 is selected.

2 Press (1) (←) repeatedly until "DEL" appears.

To delete Program 2, press (4) (→) repeatedly until "PGM 2" appears.

3 Press (5) (ENTER) for two seconds.



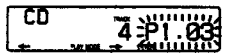
The entire program is erased

4 When you finish erasing programs, press (3) (PLAY MODE) for two seconds.

5 Press (SHIFT).

Adding tracks to a program

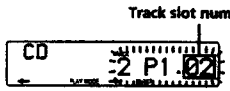
1 **Press (SHIFT), then press ③ (PLAY MODE) for two seconds.**



"P 1 " shows Program 1 is selected.

To select Program 2, press ④ (→) repeatedly until "P 2" appears.

2 **Press ① (←) or ④ (→) to select the track slot number where you want to insert a track.**



3 **Press either side of (SEEK/AMS) to select the track you want to insert.**

4 **Press ⑤ (ENTER) momentarily to enter the track.**
The current track in that slot number and the succeeding tracks shift down.

5 **To continue inserting tracks, repeat steps 2 through 4.**

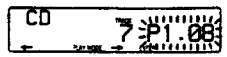
Note
*Once all 12 slots have been filled, "*Mem Full*" appears in the display, and you cannot insert tracks*

6 **When you finish inserting tracks, press ③ (PLAY MODE) for two seconds.**

7 **Press (SHIFT).**

Erasing tracks in a program

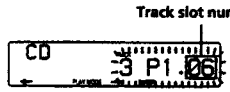
1 **Press (SHIFT), then press ③ (PLAY MODE) for two seconds.**



"P 1" shows Program 1 is selected.

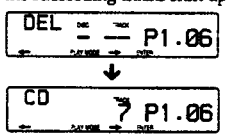
To select Program 2, press ④ (→) repeatedly until "P 2" appears

2 **Press ① (←) or ④ (→) to select the track you want to erase.**



The track currently registered in slot 6 of Program 1.

3 **Press ⑤ (ENTER) for two seconds.**
When you erase a track from a slot number, the succeeding tracks shift up to fill the gap.



4 **To continue erasing tracks, repeat steps 2 and 3.**

5 **When you finish erasing tracks, press ③ (PLAY MODE) for two seconds.**

6 **Press (SHIFT).**

EN

Radio

Memorizing stations automatically

— Best Tuning Memory (BTM)

The unit selects the stations with the strongest signals and memorizes them in the order of their frequencies. You can store up to 10 stations on each band (FM1, FM2 and AM).

Caution
When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

1 **Press (SOURCE) repeatedly to select the tuner.**
Each time you press (SOURCE), the source changes as follows.

CD ⟷ TUNER

2 **Press (MODE) repeatedly to select the band.**
Each time you press (MODE), the band changes as follows.

→ FM1 → FM2 → AM →

3 **Press (SHIFT), then press ③ (PLAY MODE) repeatedly until "B.T.M" appears.**

4 **Press ④ (→).**
The unit stores stations in the order of their frequencies on the number buttons.
A beep sound and the setting is stored.

5 **Press (SHIFT).**

Notes
- *The unit does not store stations with weak signals. If only a few stations are received, some number buttons will retain their former setting.*
- *When a number is indicated in the display, the unit starts storing stations from the one currently displayed.*

Memorializing only the desired stations

You can store up to 10 stations on each band (20 for FM1 and FM2, 10 for AM) in the order of your choice.

1 **Press (SOURCE) repeatedly to select the tuner.**

2 **Press (MODE) repeatedly to select the band (FM1, FM2 or AM).**

3 **Press either side of (SEEK/AMS) to tune in the station you want to store on the number button.**

4 **Keep the desired number button (① to ⑩) pressed for two seconds until "MEM" appears.**
The number button indication appears in the display.

Note
If you try to store another station on the same number button, the previously stored station will be erased

EN

CD Player/Radio

Receiving the memorized stations

1 Press (SOURCE) repeatedly to select the tuner.

2 Press (MODE) repeatedly to select the band (FM1, FM2 or AM).

3 Press the number button ((1) to (10)) momentarily where the desired station is stored.

If you cannot tune in a preset station

Press either side of (SEEK/AMS) momentarily to search for the station (automatic tuning).
Scanning stops when the unit receives a station. Press either side of (SEEK/AMS) repeatedly until the desired station is received.

Note
If the automatic tuning stops too frequently, press (SHIFT), then press (3) (PLAY MODE) repeatedly until "Local" (local seek mode) is displayed. Then press (4) (→) to select "Local on." Press (SHIFT)
Only the stations with relatively strong signals will be tuned in

Tip
If you know the frequency of the station you want to listen to, press and hold either side of (SEEK/AMS) for two seconds until the desired frequency appears (manual tuning)

If FM stereo reception is poor — Monaural Mode

1 Press (SHIFT), then press (3) (PLAY MODE) repeatedly until "Mono" appears.

2 Press (4) (→) repeatedly until "Mono on" appears.
The sound improves, but becomes monaural ("ST" disappears)

3 Press (SHIFT).

To go back to normal mode, select "Mono off" in step 2 above

Changing the displayed items

Each time you press (DSPL), the item changes as follows

Frequency ⟷ Clock

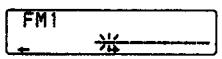
Storing the station names —Station Memo

You can assign a name to each radio station and store it in memory. The name of the current station appears in the display. You can store up to eight characters for each station.

Storing the station names

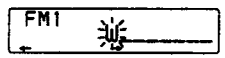
1 Tune in a station whose name you want to store.

2 Press (LIST) for two seconds.



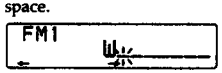
3 Enter the characters.

❶ Rotate the dial clockwise to select the desired characters.
(A → B → C → ··· Z → 0 → 1 → 2 → ··· 9 → + → − → * → / → \ → > → < → . → _)



If you rotate the dial counterclockwise, the characters appear in the reverse order
If you want to put a blank space between characters, select "_" (underbar).

❷ Press (4) (→) after locating the desired character.
The flashing cursor moves to the next space.



If you press (1) (←), the flashing cursor moves to the left

❸ Repeat steps ❶ and ❷ to enter the entire name.

4 To return to normal radio reception, press (LIST) for two seconds.

Tip
To erase a character, select "_" (underbar) for each character

Displaying the station name

Press (DSPL) during radio reception.

Each time you press (DSPL), the item changes as follows:

Station name* → Frequency → Clock

** If the station name is not stored, "NO Name" appears in the display for one second*

Erasing the station name

1 Tune in any station and press (LIST) for two seconds.

2 Press (DSPL) for two seconds.
"Delete" and the station name appear in the display

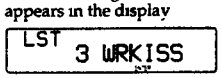
3 Rotate the dial to select the name you want to erase.

4 Press (5) (ENTER) for two seconds.
The name is erased
Repeat steps 3 and 4 if you want to erase other names

5 Press (LIST) for two seconds.
The unit returns to normal radio reception mode

Locating a station by name — List-up

1 Press (LIST) momentarily.
The name assigned to the current station appears in the display



2 Press (LIST) repeatedly until you find the desired station.

3 Press (5) (ENTER) to tune in the desired station.

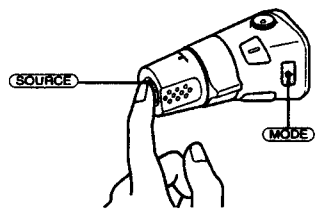
Note
After the station name or frequency has been displayed for five seconds, the display goes back to normal mode. To turn off the display, press (DSPL)

Other Functions

Using the rotary remote

The rotary remote works by pressing buttons and/or rotating controls.
You can control an optional CD or MD changer with the rotary remote.

By pressing buttons (the SOURCE and MODE buttons)

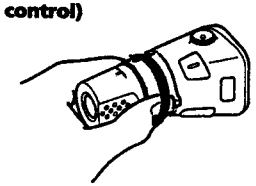


Each time you press (SOURCE), the source changes as follows:
TUNER → CD → MD

Pressing (MODE) changes the operation in the following ways;
- **Tuner: FM1 → FM2 → AM**
- **CD changer: CD1 → CD2 → ...**
- **MD changer: MD1 → MD2 → ...**

Tip
When the POWER SELECT switch is set to position ❶, you can turn on this unit by pressing (SOURCE) on the rotary remote

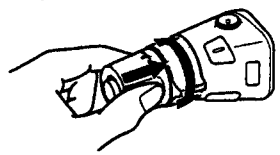
By rotating the control (the SEEK/ AMS control)



Rotate the control momentarily and release it to:

- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to tune in a specific station.

By pushing in and rotating the control (the PRESET/DISC control)



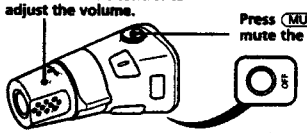
Push in and rotate the control to:

- Receive the stations memorized on the number buttons.
- Change the disc.

Other operations

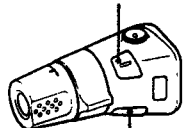
Rotate the VOL control to adjust the volume.

Press (MUTE) to mute the sound.



Press (OFF) to turn off the unit.

Press (SOUND) to adjust the volume and sound menu.

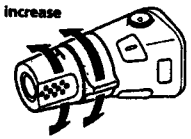


Press (LIST) to display memorized names.

Changing the operative direction

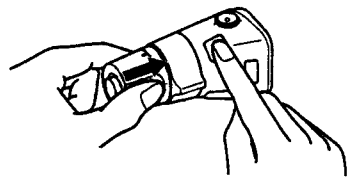
The operative direction of controls is factory-set as in the illustration below

To increase



To decrease

If you need to mount the rotary remote on the right side of the steering column, you can reverse the operative direction



Press (SOUND) for two seconds while pushing the VOL control.

Tip

You can control the operative direction of controls with the unit (page 13)

Adjusting the sound characteristics

You can adjust the bass, treble, balance and fader

Each source can store the bass and treble levels respectively.

1 Select the item you want to adjust by pressing (SOUND) repeatedly.

VOL (volume) → BAS (bass) → TRE (treble) → BAL (balance) → FAD (fader)

2 Adjust the selected item by rotating the dial.

Adjust within three seconds after selecting the item. (After three seconds, the dial functions work as the volume control.)

Muting the sound

Press (MUTE) on the rotary remote or wireless remote.

"Mute on" flashes momentarily

To restore the previous volume level, press (MUTE) again.

Tip

The unit decreases the volume automatically when a telephone call comes in (Telephone mute function)

Changing the sound and display settings

You can set:

- Clock (page 5).
- D Info (Dual Information) to display the clock and the play mode at the same time (ON) or to display the information alternately (OFF).
- Amber/Green to change the illumination color to amber or green.
- Dimmer to change the brightness of the display.
  - — Select "Auto" to dim the display only when you turn the lights on.
  - — Select "on" to dim the display.
- Contrast to adjust the contrast if the indications in the display are not recognizable because of the unit's installed position.
- Beep to turn on or off the beeps.
- RM (Rotary Remote) to change the operative direction of the controls of the rotary remote
  - — Select "norm" to use the rotary remote as the factory preset position.
  - — Select "rev" when you mount the rotary remote on the right of the steering column.
- Loud (Loudness) to enjoy bass and treble even at low volume. The bass and treble will be reinforced.
- A.Scrl (Auto Scroll) (page 14).

1 Press (SHIFT).

2 Press (2) (SET UP) repeatedly until the desired item appears.

Each time you press (2) (SET UP), the item changes as follows:

Clock → D.Info* → Amber/Green → Dimmer → Contrast → Beep → RM → Loud* → A.Scrl

** When you have not tune the station or there is no CD/MD being played, these items will not appear*

Note

The displayed item will differ depending on the source

3 Press (4) (→) to select the desired setting (for example: on or off).

For the "Contrast" setting, pressing (4) (→) makes the contrast higher and pressing (1) (←) makes the contrast lower

4 Press (SHIFT).

After the mode setting is complete, the display goes back to normal playback mode.

With Optional Equipment

CD/MD Changer

You can control up to 7 CD and MD changers with this unit.

Playing a CD or MD

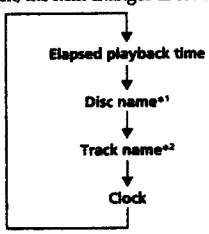
1 Press (SOURCE) repeatedly to select the CD or MD.

2 Press (MODE) until the desired changer appears.
CD/MD playback starts.

When a CD or MD changer is connected, all the tracks play from the beginning.

Changing the displayed item

Each time you press (DSPL) during CD/MD playback, the item changes as follows



*1 *If you have not labeled the disc, "NO D Name" appears in the display*
*2 *If the track name of an MD is not prerecorded, "NO T.Name" appear in the display*

Tip
If the name of the MD is too long, you can scroll it across the display by pressing (SHIFT), then (1) (←)

Automatically scrolling a disc name — Auto Scroll

If the disc name or track name on an MD exceeds 10 characters and the Auto Scroll function is on, automatically scrolls on the display as follows:
- *The disc name appears when the disc has changed (if the disc name is selected).*
- *The track name appears when the track has changed (if the track name is selected).*
- *The disc or track name appears depending on the setting when you press (SOURCE) to select an MD*

If you press (DSPL) to change the display item, the disc or track name of the MD is scrolled automatically whether you set the function on or off.

1 During playback, press (SHIFT).

2 Press (2) (SET UP) repeatedly until "A.Scrl" appears.

3 Press (4) (→) to select "A.Scrl on.

4 Press (SHIFT)

To cancel Auto Scroll, select "A.Scrl off" in step 2 above.

Displaying the recording date of the current MD

Press (DSPL) for two seconds during MD playback.
The recording date of the track is displayed for about three seconds.

Locating a specific track — Automatic Music Sensor (AMS)

During playback, press either side of (SEEK/AMS) once for each track you want to skip.

To locate succeeding tracks

To locate preceding tracks

Locating a specific point in a track — Manual Search

During playback, press and hold either side of (SEEK/AMS). Release the button when you have found the desired point.

To search forward

To search backward

Locating a disc by disc number — Direct Disc Selection

Press the number button that corresponds with the desired disc number.
The desired disc in the current changer begins playback.

Scanning the tracks — Intro Scan

You can play the first 10 seconds of all the tracks on the current disc

1 During playback, press (SHIFT), then press (3) (PLAY MODE) repeatedly until "Intro" appears.

2 Press (4) (→) to select "Intro on."
Intro Scan starts.

3 Press (SHIFT).

To go back to normal playback mode, select "Intro off" in step 2 above.

Playing tracks repeatedly — Repeat Play

You can select:
- Repeat 1 to repeat a track.
- Repeat 2 to repeat a disc
- Repeat 3 to repeat all the discs in the current changer.

1 During playback, press (SHIFT).

2 Press (6) (REP) repeatedly until the desired setting appears.

Repeat 1 → Repeat 2 → Repeat 3 → Repeat off →

Repeat Play starts.

3 Press (SHIFT).

To go back to normal playback mode, select "Repeat off" in step 2 above

Note
When you play back a CD on this unit, Repeat 3 has the same function as Repeat 2

Playing tracks in random order — Shuffle Play

You can select:
- Shuf 1 to play the tracks on the current disc in random order.
- Shuf 2 to play the tracks in the current changer in random order.
- Shuf 3 to play all the tracks in random order

1 During playback, press (SHIFT).

2 Press (7) (SHUF) repeatedly until the desired setting appears.

Shuf 1 → Shuf 2 → Shuf 3 → Shuf off →

Shuffle Play starts.

3 Press (SHIFT).

To go back to normal playback mode, select "Shuf off" in step 2 above.

Creating a program

— Program Memory (CD/MD changer with the program memory function)

You can play tracks in the order you want by making your own program. You can make two programs: Program 1 and Program 2. You can select up to 12 tracks for each program. You can store the programs in memory.

1 Press (SHIFT), then press ③ (PLAY MODE) for two seconds.

Program edit mode

"P 1" shows Program 1 is selected.

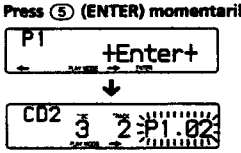
If you have labelled the disc, the bank edit mode appears. Press ③ (PLAY MODE) to display "P 1" above.

To select Program 2, press ④ (→) repeatedly until "P 2" appears.

2 Select the track you want.

- **Press (SOURCE) repeatedly to select CD or MD.**
- **Press (MODE) repeatedly to select the changer.**
- **Press (SHIFT), then press the number button to select the disc.**
- **Press (SHIFT).**
- **Press either side of (SEEK/AMS) to select the track.**

3 Press ⑤ (ENTER) momentarily.



4 To continue entering tracks, repeat steps 2 and 3.

5 When you finish entering tracks, press ③ (PLAY MODE) for two seconds.

6 Press (SHIFT).

Notes

- *"*Wait*" appears in the display while the unit is reading the data, or when a disc has not been put into the unit*
- *"*Mem Full*" appears in the display when you try to enter more than 12 tracks into a program.*

Playing the stored program

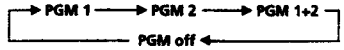
Changing the disc order in the changer will not affect program memory play

You can select:
- PGM 1 to play Program 1.
- PGM 2 to play Program 2.
- PGM 1+2 to play Programs 1 and 2.

1 Press (SHIFT).

2 Press ③ (PLAY MODE) repeatedly until "PGM" appears.

3 Press ④ (→) repeatedly until the desired program appears.



Program Play starts

4 Press (SHIFT).

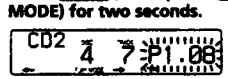
To go back to normal playback mode, select "PGM off" in step 3 above.

Notes

- *If you press the number button during program memory play, program memory play is interrupted, and playback of the selected disc starts*
- *"NO Data" appears in the display if no track is stored in the program*
- *If a track stored into the program memory is not in the disc magazine, the track will be skipped.*
- *When the disc magazine contains no tracks stored into the program memory, or when the program information has not been loaded yet, "Not Ready" appears*

Erasing an entire program

1 Press (SHIFT), then press ③ (PLAY MODE) for two seconds.



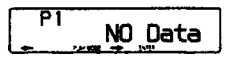
"P 1" shows Program 1 is selected.

If you have labelled the disc, the bank edit mode appears. Press ③ (PLAY MODE) to display "P 1" above.

2 Press ① (←) repeatedly until "DEL" appears.

To erase Program 2, press ④ (→) repeatedly until "PGM 2" appears.

3 Press ⑤ (ENTER) for two seconds.



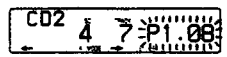
The entire program is erased.

4 When you finish erasing programs, press ③ (PLAY MODE) for two seconds.

5 Press (SHIFT).

Adding tracks to a program

1 Press (SHIFT), then press ③ (PLAY MODE) for two seconds.



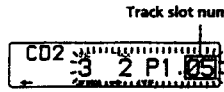
"P 1" shows Program 1 is selected.

If you have labelled the disc, the bank edit mode appears. Press ③ (PLAY MODE) to display "P 1" above.

To select Program 2, press ④ (→) repeatedly until "P 2" appears.

2 Press ① (←) or ④ (→) to select the track slot number where you want to insert a track.

Track slot number



3 Press either side of (SEEK/AMS) to select the track you want to insert.

4 Press ⑤ (ENTER) momentarily to enter the track.
The current track in that slot number and the succeeding tracks shift down.
To continue inserting tracks, repeat steps 2 through 4.

Note

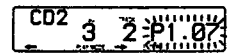
*Once all 12 slots have been filled "*Mem Full*" appears in the display and you cannot insert tracks*

5 When you finish inserting tracks, press ③ (PLAY MODE) for two seconds.

6 Press (SHIFT).

Erasing tracks in a program

1 Press (SHIFT), then press ③ (PLAY MODE) for two seconds.



"P 1" shows Program 1 is selected.

If you have labelled the disc, the bank edit mode appears. Press ③ (PLAY MODE) to display "P 1" above.

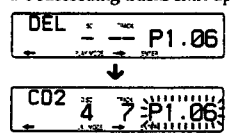
To select Program 2, press ④ (→) repeatedly until "P 2" appears.

2 Press ① (←) or ④ (→) to select the track you want to erase.

Track slot number

The track currently registered in slot 6 of Program 1.

3 Press ⑤ (ENTER) for two seconds.
When you erase a track from a slot number, the succeeding tracks shift up to fill the gap.



4 To continue erasing tracks, repeat steps 2 and 3.

5 When you finish erasing tracks, press ③ (PLAY MODE) for two seconds.

6 Press (SHIFT).

EN

EN

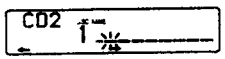
CD/MD Changer

Labeling a CD — Disc Memo

(CD changer with the custom file function)

You can label each disc with a personalized name. You can enter up to eight characters for a disc. If you label a CD, you can locate the disc by name and select the specific tracks for playback (page 19).

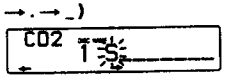
1 Play the CD and press (LIST) for two seconds.



2 Enter the characters.

❶ Rotate the dial clockwise to select the desired characters.

(A → B → C → ··· Z → 0 → 1 → 2 → ··· 9 → + → − → * → / → \ → > → < → . → _)

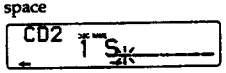


If you rotate the dial counterclockwise, the characters appear in the reverse order

If you want to put a blank space between characters, select "_" (under-bar)

❷ Press (4) (→) after locating the desired character.

The flashing cursor moves to the next space



If you press (1) (←), the flashing cursor moves to the left.

❸ Repeat steps ❶ and ❷ to enter the entire name.

3 To return to normal CD playback mode, press (LIST) for two seconds.

Tip

To erase/correct a name enter "_" (under-bar) for each character

Displaying the disc memo name

Press (DSPL) during CD playback.

Each time you press (DSPL) during CD playback, the item changes as follows:

Elapsed playback time ↔ Disc name

Erasing the disc memo

1 Press (SOURCE) repeatedly to select CD.

2 Press (MODE) repeatedly to select the CD changer.

3 Press (LIST) for two seconds.

4 Press (DSPL) for two seconds.

5 Rotate the dial to select the name you want to erase.

6 Press (5) (ENTER) for two seconds.
The name is erased.
Repeat steps 5 and 6 if you want to erase other names.

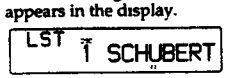
7 Press (LIST) for two seconds.
The unit returns to normal CD playback mode

Locating a disc by name

— List-up (CD changer with the custom file function or MD changer)

You can use this function for discs that have been assigned a custom name. For more information on disc names, refer to "Labeling a CD."

1 Press (LIST) momentarily.
The name assigned to the current disc appears in the display.



2 Press (LIST) repeatedly until you find the desired disc.

3 Press (5) (ENTER) to play back the disc.

Notes

- *After a disc name has been displayed for five seconds, the display goes back to normal playback mode To turn off the display, press (DSPL)*
- *The track names are not displayed during MD playback*
- *If there are no discs in the magazine, "NO Disc" appears in the display*
- *If a disc has not been assigned a custom file, "********" appears in the display*
- *If the disc information has not been read by the unit, "?" appears in the display To load the disc, first press the number button, then choose the disc that has not been loaded*
- *The information appears only in upper case There are also some letters which cannot be displayed (during MD playback)*

Selecting specific tracks for playback

— Bank

(CD changer with the custom file function)

If you label the disc, you can set the unit to skip tracks and play only the tracks you want

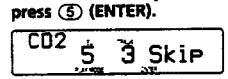
1 Start playing the disc and press (SHIFT). Then press (3) (PLAY MODE) for two seconds.

Bank edit mode.

Note

If you have not labeled the disc, the bank edit mode does not appear and the programme edit mode appears To go back to normal playback mode, press (SHIFT)

2 Press either side of (SEEK/AMS) to select the track number you want to skip and press (5) (ENTER).



The indication changes from "Play" to "Skip " If you want to return to "Play," press (5) (ENTER) again

3 Repeat step 2 to set the "Play" or "Skip" mode on all the tracks.

4 Press (3) (PLAY MODE) for two seconds.
The unit returns to normal CD playback mode

5 Press (SHIFT).

Notes

- *You can set the "Play" and "Skip" mode on up to 24 tracks*
- *You cannot set the "Skip" mode on all the tracks*

Playing the specific tracks only

You can select:

- Bank on to play the tracks with the "Play" setting
- Bank inv (Inverse) to play the tracks with the "Skip" setting

1 During playback, press (SHIFT), then press (3) (PLAY MODE) repeatedly until "Bank" appears.

2 Press (4) (→) to repeatedly until the desired setting appears.

→ Bank on → Bank inv → Bank off →

Playback starts from the track following the current one.

3 Press (SHIFT).

To go back to normal playing mode, select "Bank off" in step 2 above.

EN

CD/MD Changer

Additional Information

Precautions

- If your car was parked in direct sunlight resulting in a considerable rise in temperature inside the car, allow the unit to cool off before operating it.
- If no power is being supplied to the unit, check the connections first. If everything is in order, check the fuse.
- If no sound comes from the speakers of two-speaker systems, set the fader control to the center position.
- If your car is equipped with a power aerial, it will extend automatically while the unit is operating.

EN

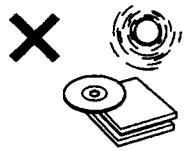
If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

Notes on handling CDs

A dirty or defective disc may cause sound dropouts while playing. To enjoy optimum sound, handle the disc as follows.
Handle the disc by its edge. To keep the disc clean, do not touch the surface

Do not stick paper or tape on the labelled surface.

Do not expose the discs to direct sunlight or heat sources such as hot air-ducts, or leave them in a car parked in direct sunlight where there can be a considerable rise in the temperature inside the car.



Before playing, clean the discs with an optional cleaning cloth. Wipe each disc from the center out.
Do not use solvents such as benzine, thinner, commercially available cleaners or antistatic spray intended for analog discs

Notes on moisture condensation

On a rainy day or in a very damp area, moisture may condense on the lenses inside the CD player. Should this occur, the unit will not operate properly In this case, remove the disc and wait for about an hour until the moisture evaporates.

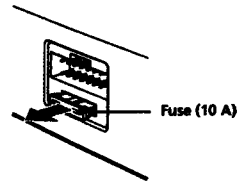
When you play 8 cm CDs

Use the optional Sony compact disc single adapter (CSA-8) to protect the CD player from being damaged.

Maintenance

Fuse replacement

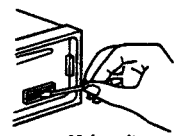
When replacing the fuse, be sure to use one that matches the amperage described on the fuse. If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.



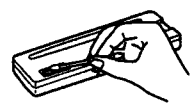
Warning
Never use a fuse with an amperage rating exceeding the one supplied with the unit as this could damage the unit.

Cleaning the connectors

The unit may not function properly if the connectors between the unit and the front panel are not clean. To prevent this, open the front panel by pressing (RELEASE), then detach it and clean the connectors with a cotton swab dipped in alcohol. Do not apply too much force. Otherwise, the connectors may be damaged.

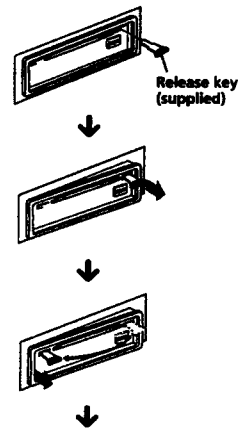


Main unit

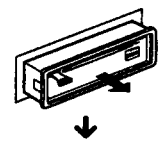


Back of the front panel

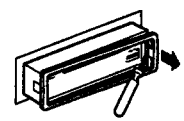
Dismounting the unit



Pull the unit out while the release key is inserted.



Press the clip inside the front cover with a thin screwdriver, and lever the front cover free.



EN

Connections

Caution

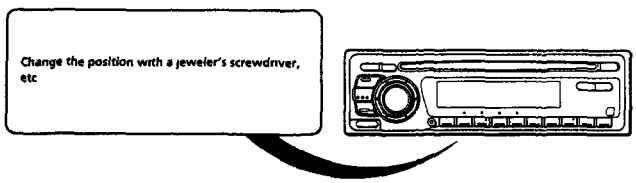
- Thus unit is designed for negative ground 12 V DC operation only
- *Before making connections, disconnect the ground terminal of the car battery to avoid short circuits*
- Connect the **yellow** and **red** power input leads only after all other leads have been connected
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized *when the ignition key is in the accessory position*
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating If you connect this *unit in series with other stereo components, the car circuit they are connected to must be rated higher* than the sum of the individual component's fuse rating If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery If no car circuits are available for connecting *this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the* unit blows its fuse, no other circuits will be cut off
- The use of optional instruments with this product will increase eye hazard

If Your Car has No Accessory Position on the Ignition Key Switch — POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played However, this setting may cause some car battery wear **If your car has no accessory position on the ignition key switch** To avoid this battery wear, **set the POWER SELECT switch located on the bottom of the unit to the ⏻ position, then press the reset button** The illumination is reset to stay off while the unit is not being played

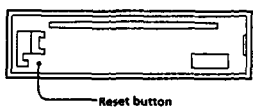
Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ⏻ position



Reset Button

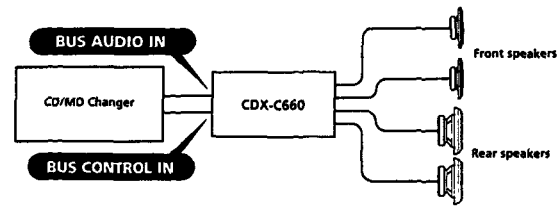
When the installation and connections are over, be sure to press the reset button with a ball-point pen etc



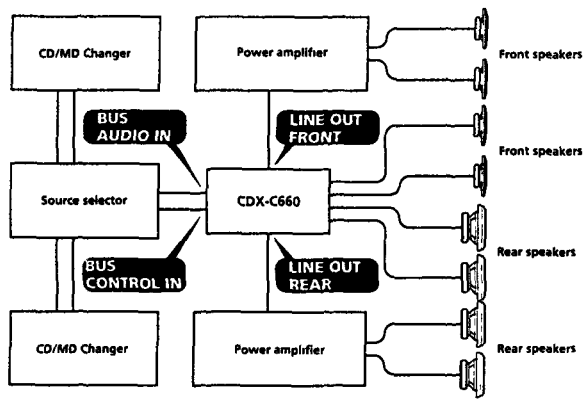
Connection Diagram

For connecting two or more changers, the source selector XA-C30 (optional) and the BUS cable RC-61 (1 m) or RC-62 (2 m) (optional) are necessary

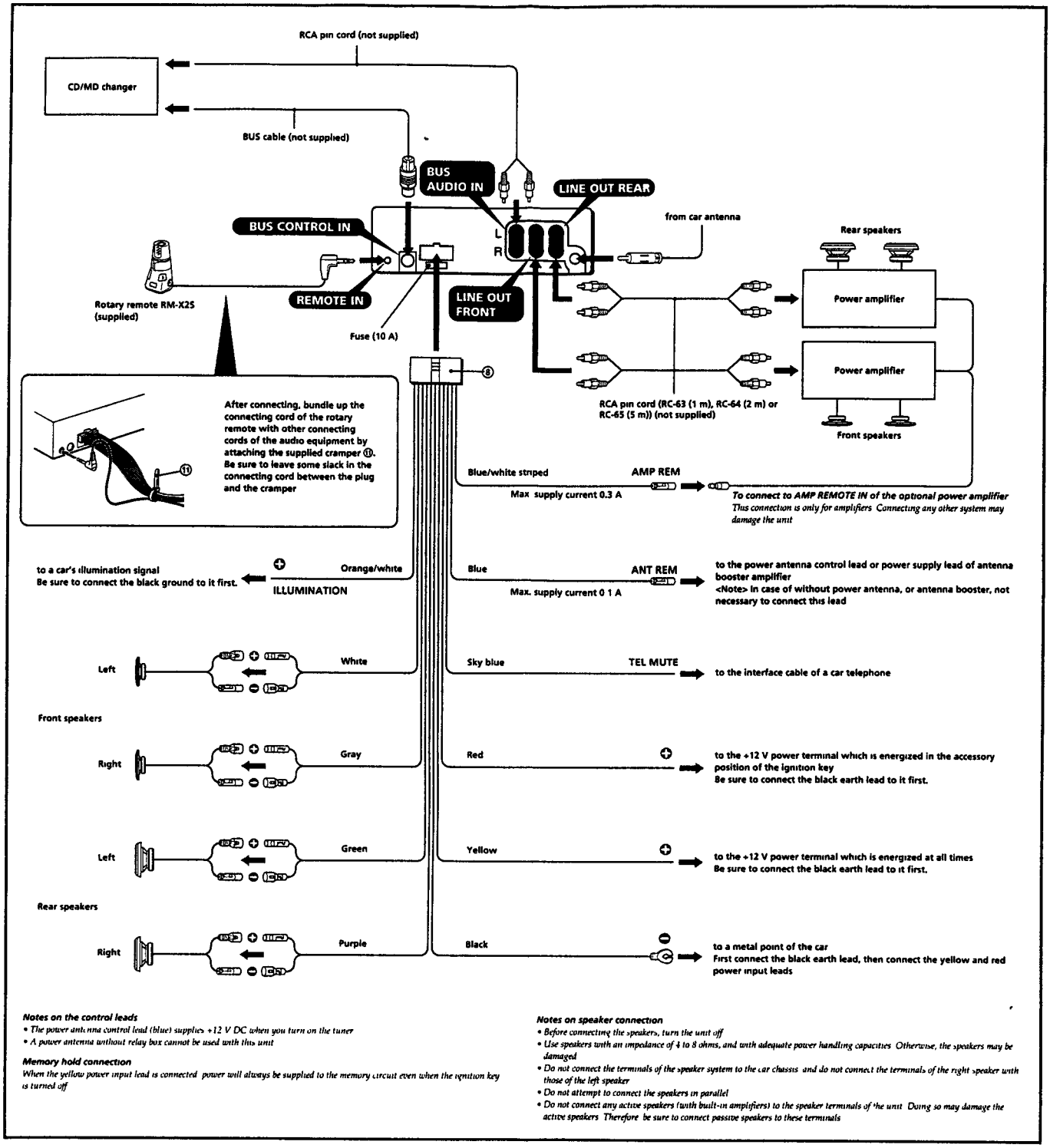
Example 1



Example 2



Connection Example


RCA pin cord (not supplied)
CD/MD changer
BUS cable (not supplied)
BUS AUDIO IN
LINE OUT REAR
BUS CONTROL IN
from car antenna
Rear speakers
L
R
Rotary remote RM-X25 (supplied)
REMOTE IN
LINE OUT FRONT
Fuse (10 A)
Power amplifier
Power amplifier
RCA pin cord (RC-63 (1 m), RC-64 (2 m) or RC-65 (5 m)) (not supplied)
Front speakers
After connecting, bundle up the connecting cord of the rotary remote with other connecting cords of the audio equipment by attaching the supplied cramper ⑪. Be sure to leave some slack in the connecting cord between the plug and the cramper
Blue/white striped
AMP REM
Max supply current 0.3 A
To connect to AMP REMOTE IN of the optional power amplifier
This connection is only for amplifiers Connecting any other system may damage the unit
to a car's illumination signal
Be sure to connect the black ground to it first.
Orange/white
ILLUMINATION
Blue
ANT REM
Max. supply current 0 1 A
to the power antenna control lead or power supply lead of antenna booster amplifier
<Note> In case of without power antenna, or antenna booster, not necessary to connect this lead
Left
White
Sky blue
TEL MUTE
to the interface cable of a car telephone
Front speakers
Right
Gray
Red
to the +12 V power terminal which is energized in the accessory position of the ignition key
Be sure to connect the black earth lead to it first.
Left
Green
Yellow
to the +12 V power terminal which is energized at all times
Be sure to connect the black earth lead to it first.
Rear speakers
Right
Purple
Black
to a metal point of the car
First connect the black earth lead, then connect the yellow and red power input leads

Notes on the control leads

- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner*
- *A power antenna without relay box cannot be used with this unit*

Memory hold connection

When the yellow power input lead is connected power will always be supplied to the memory circuit even when the ignition key is turned off

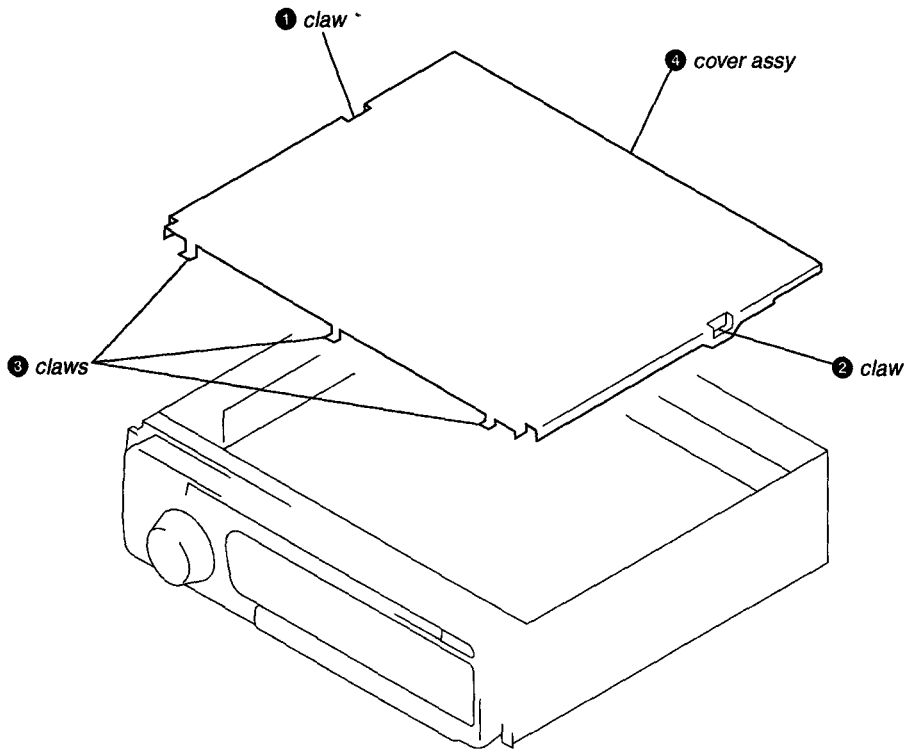
Notes on speaker connection

- *Before connecting the speakers, turn the unit off*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities Otherwise, the speakers may be damaged*
- *Do not connect the terminals of the speaker system to the car chassis and do not connect the terminals of the right speaker with those of the left speaker*
- *Do not attempt to connect the speakers in parallel*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit Doing so may damage the active speakers Therefore be sure to connect passive speakers to these terminals*

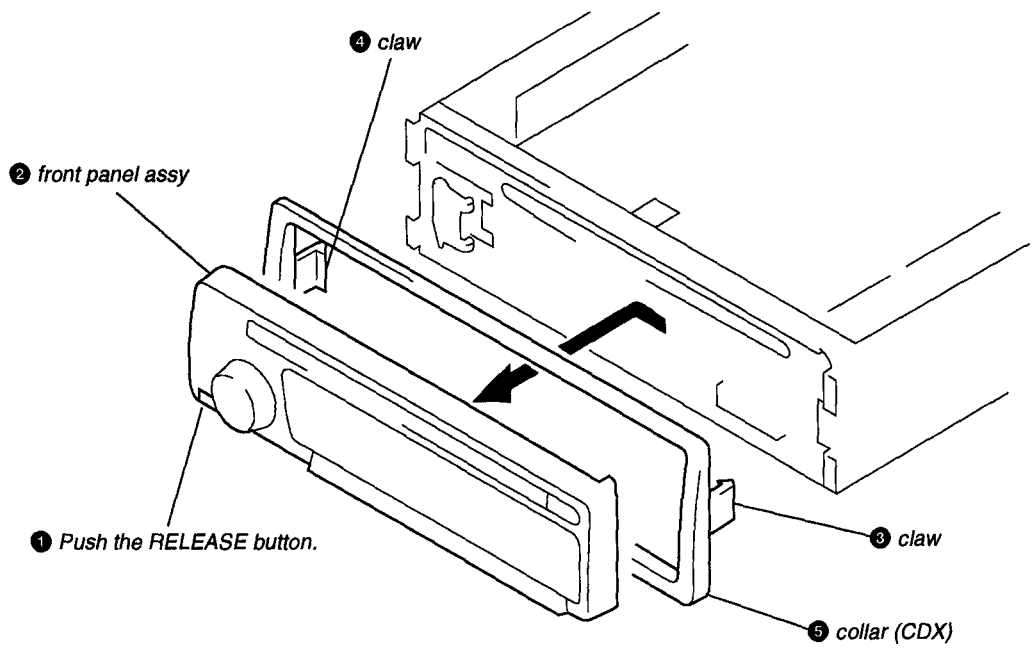
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

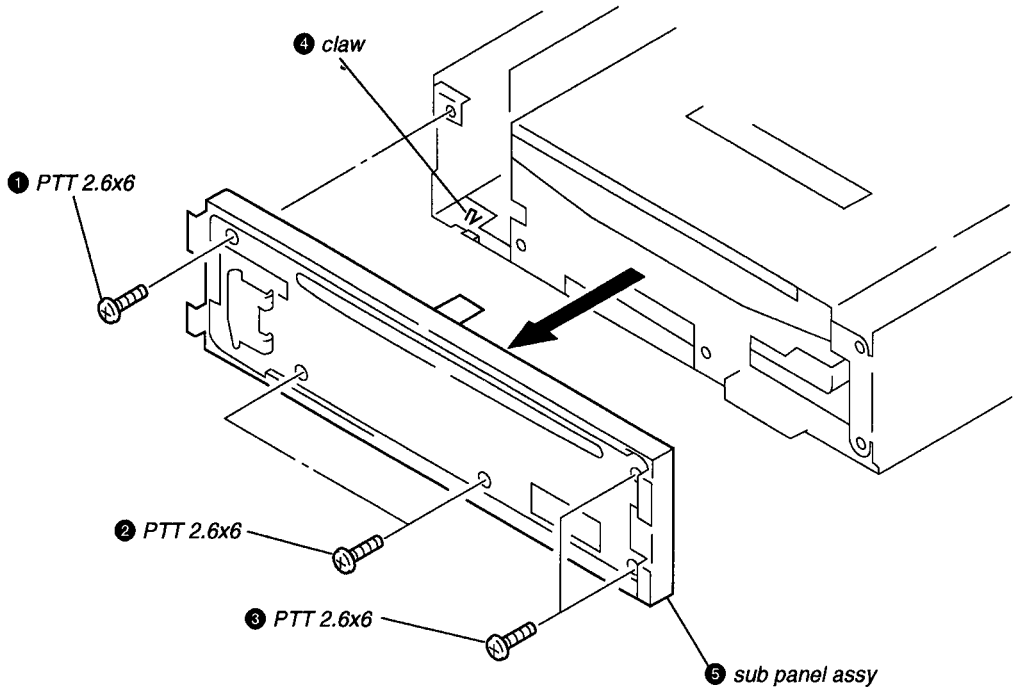
2-1. COVER ASSY



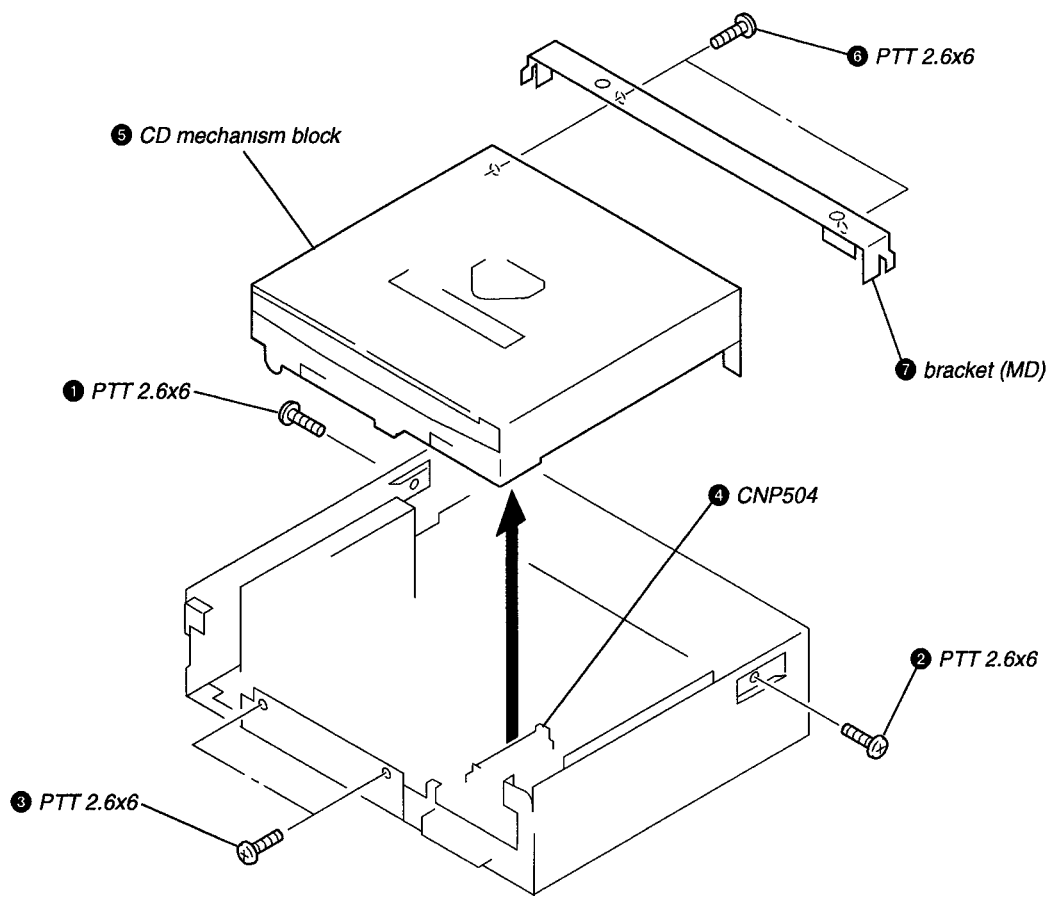
2-2. FRONT PANEL ASSY



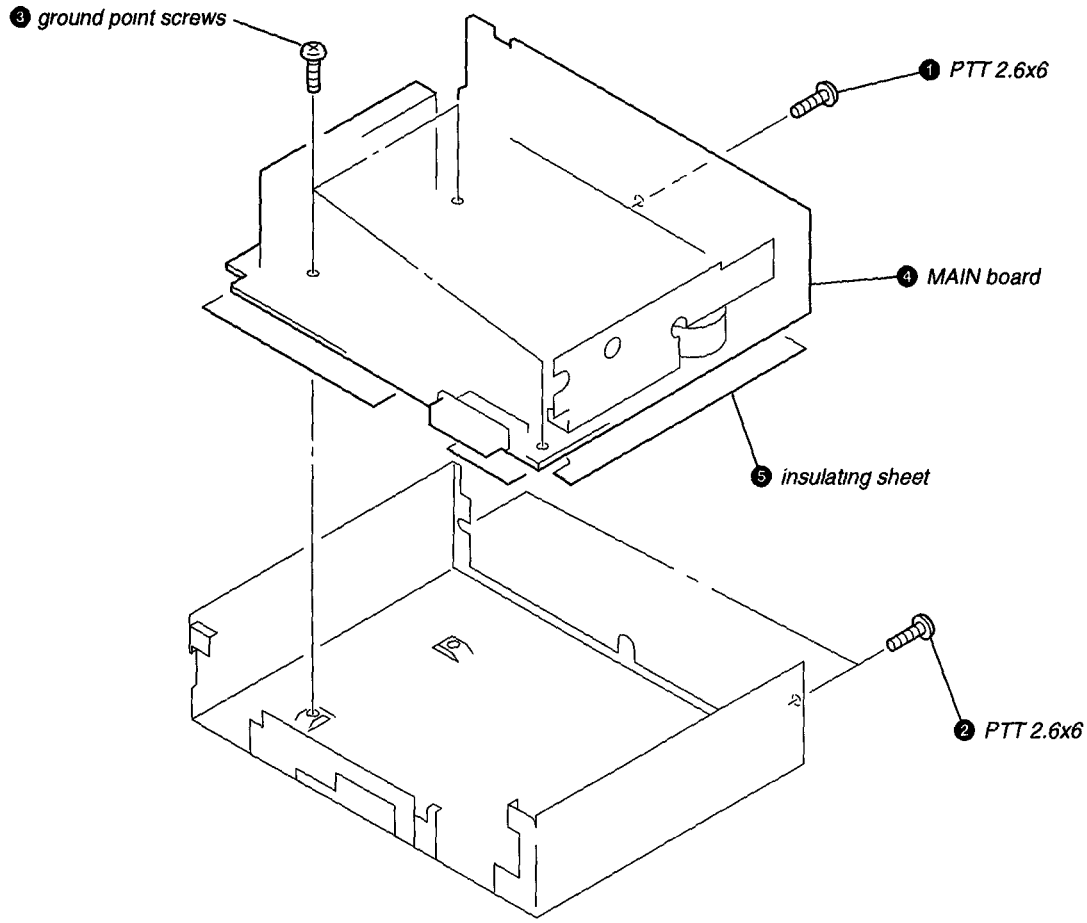
2-3. SUB PANEL ASSY



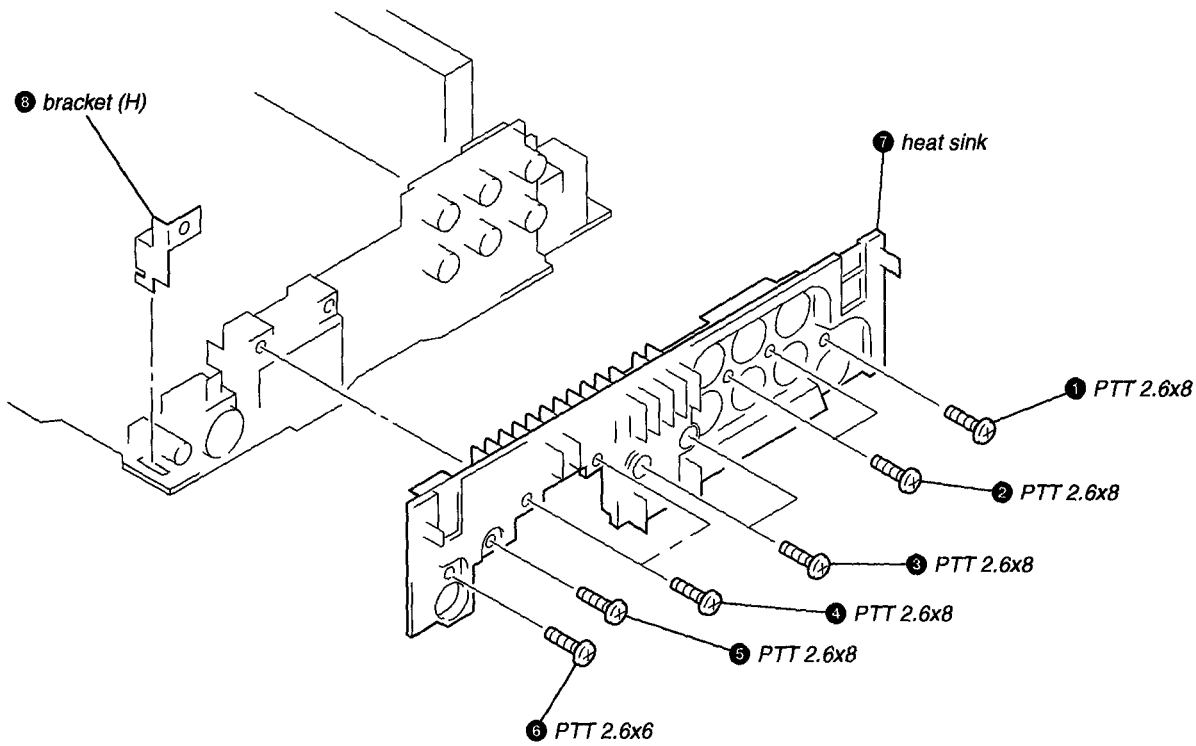
2-4. CD MECHANISM BLOCK



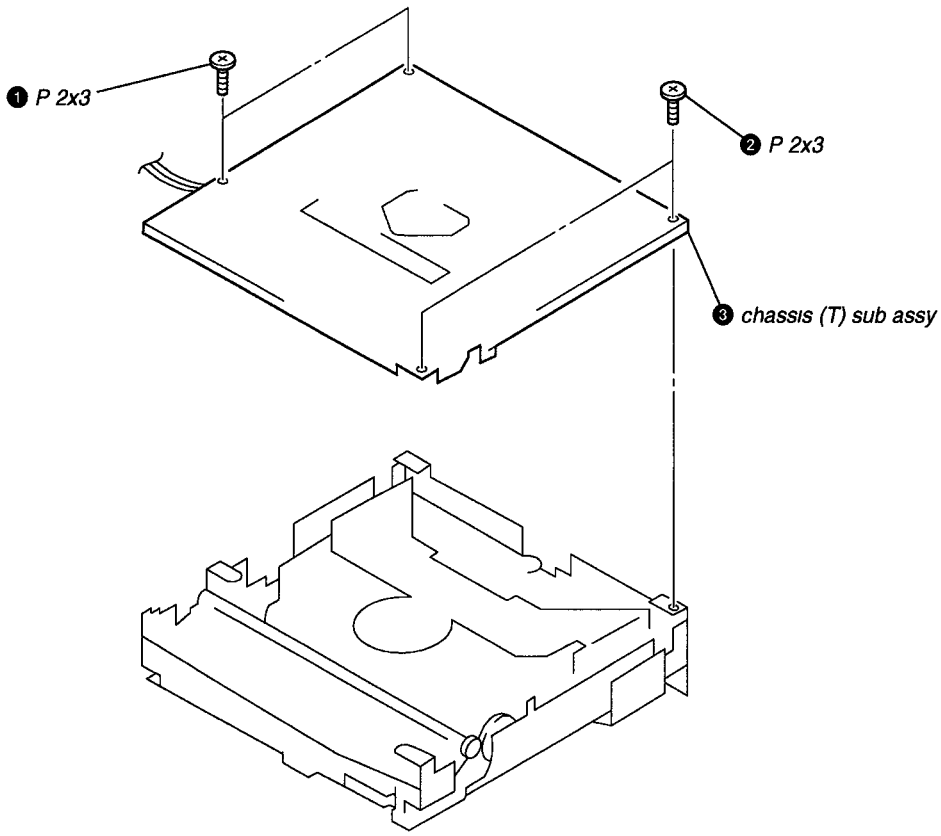
2-5. MAIN BOARD



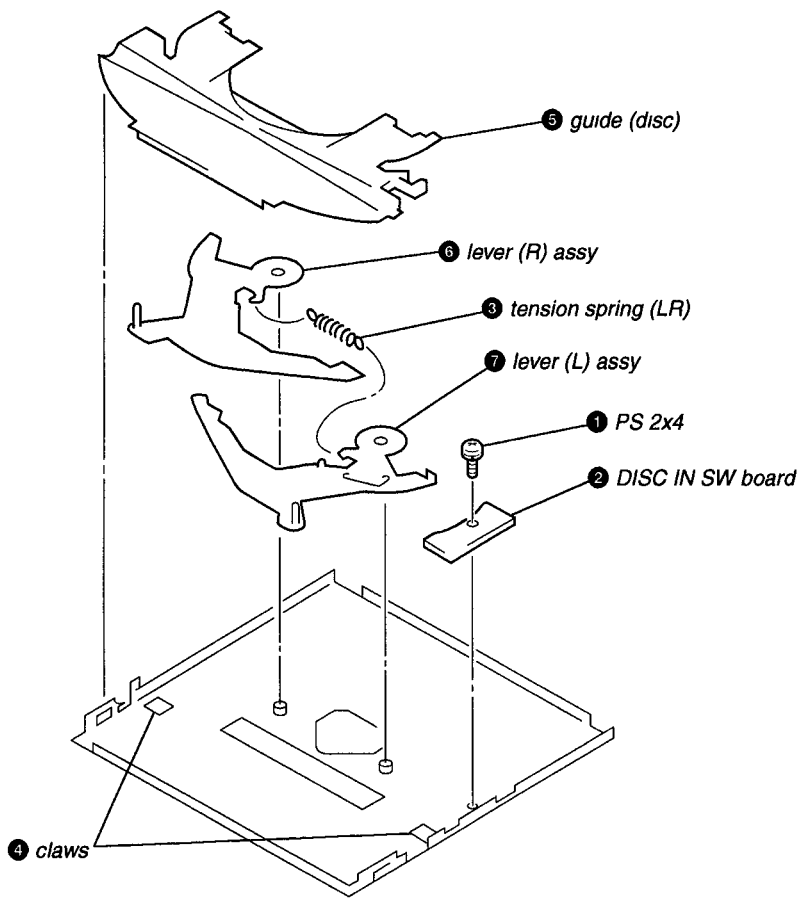
2-6. HEAT SINK



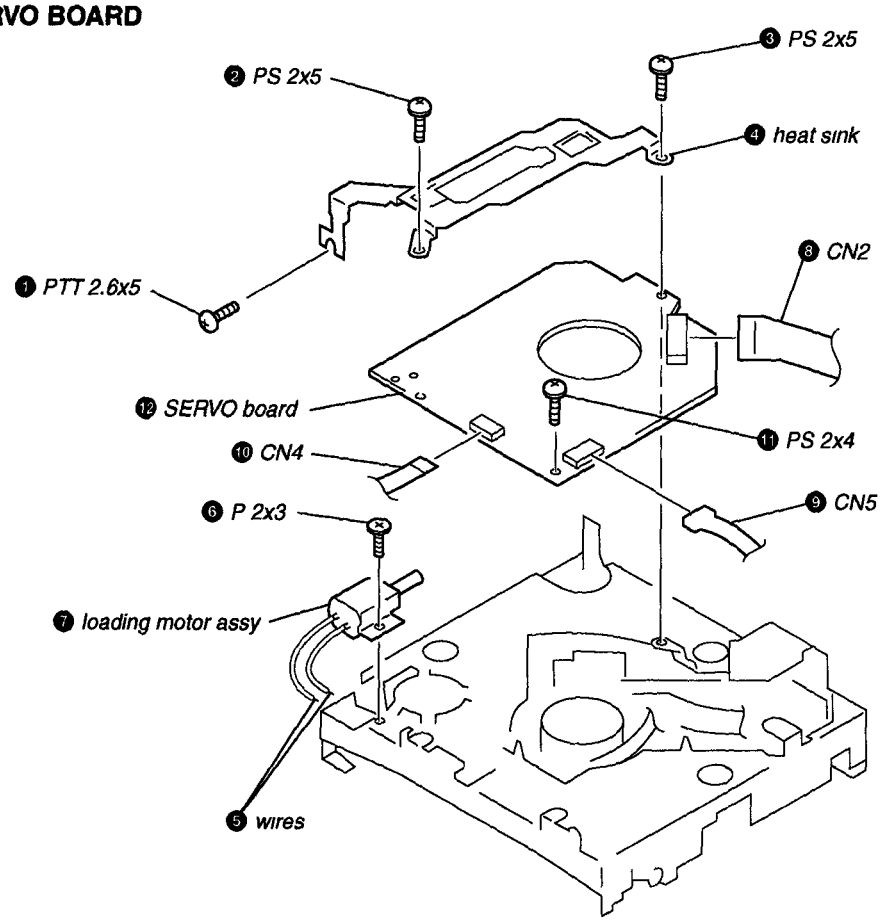
2-7. CHASSIS (T) SUB ASSY



2-8. LEVER ASSY



2-9. SERVO BOARD



2-10. ROLLER ASSY

• When installing, take note of the positions arm (roller) and washers. (Fig. 1)

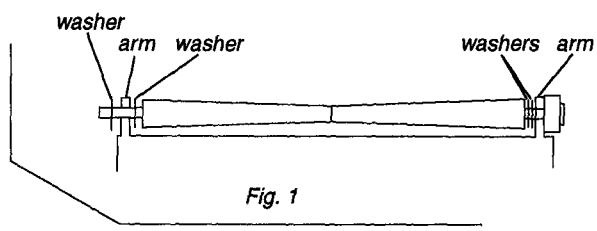
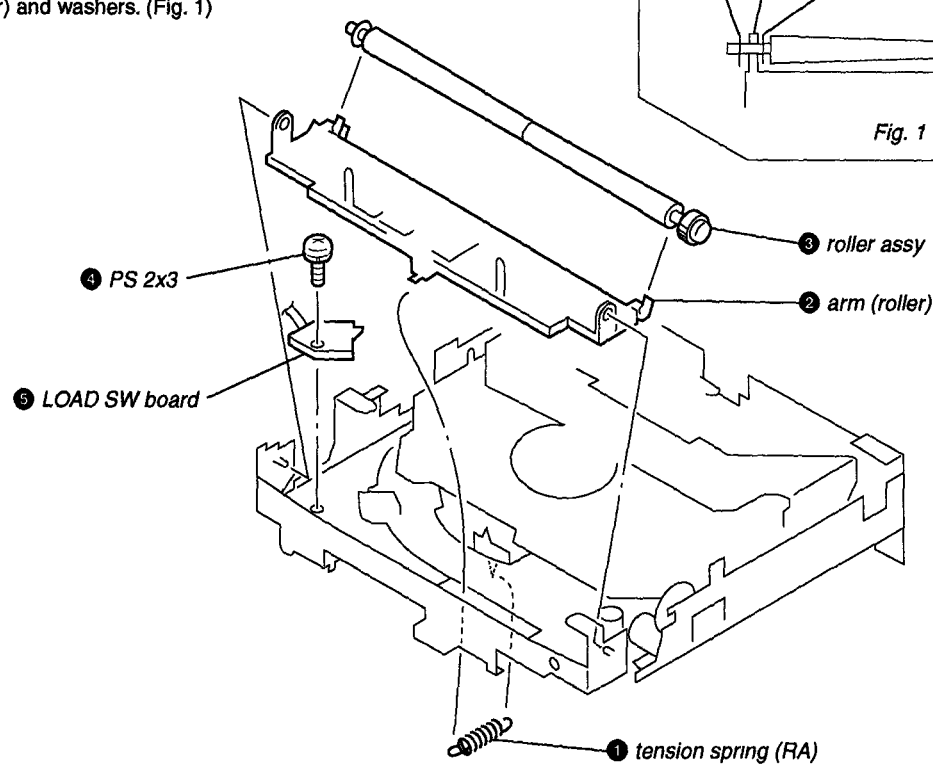
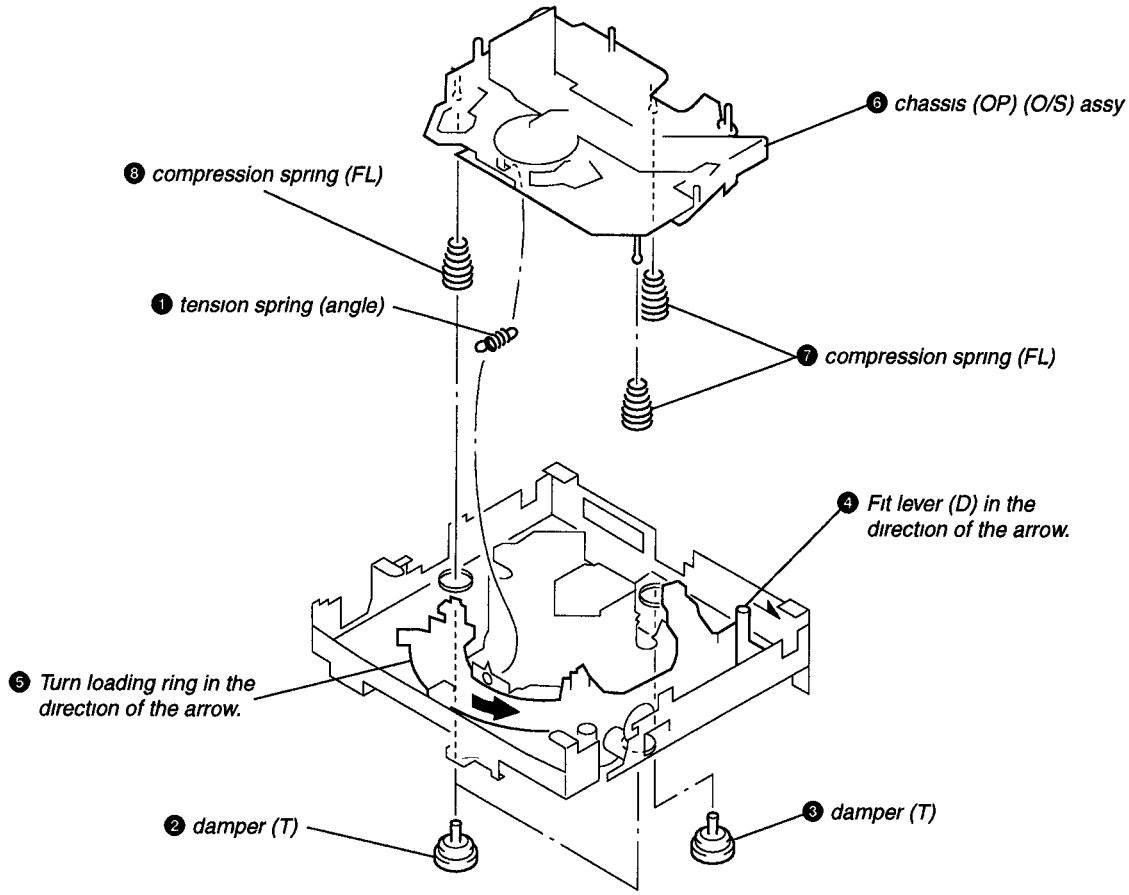


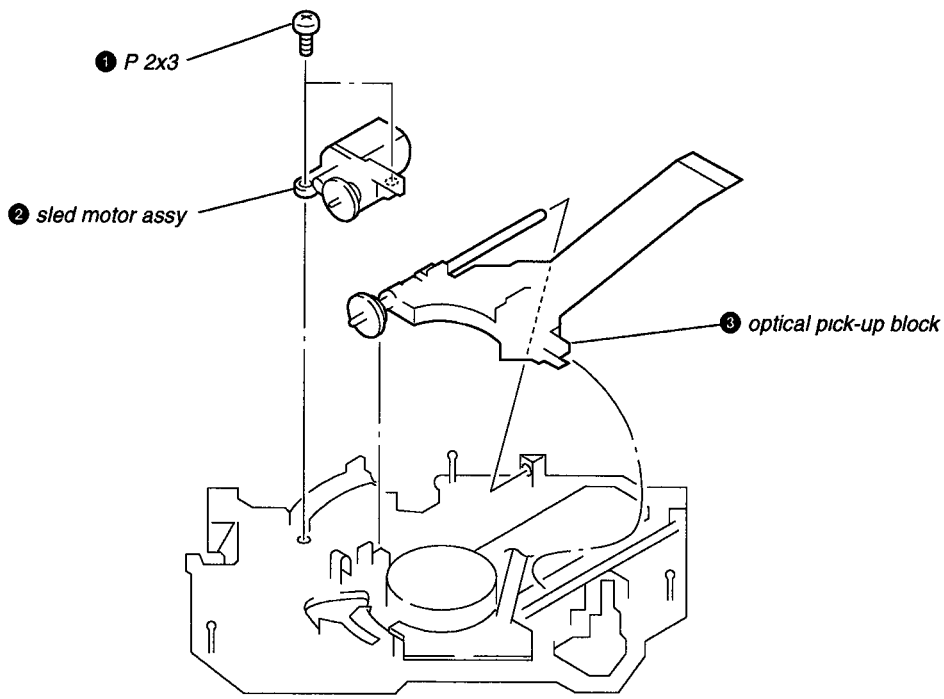
Fig. 1



2-11. CHASSIS (OP) (O/S) ASSY


❻ chassis (OP) (O/S) assy
❽ compression spring (FL)
❶ tension spring (angle)
❼ compression spring (FL)
❹ Fit lever (D) in the direction of the arrow.
❺ Turn loading ring in the direction of the arrow.
❷ damper (T)
❸ damper (T)

2-12. OPTICAL PICK-UP BLOCK



SECTION 3
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/ Stop Level and AM Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>
1. Set the "OFF" mode.
2. Push the preset [4] button.
3. Push the preset [5] button.
4. Press the preset [1] button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

<Release the Test Mode>
1. Push the [OFF] button.

TUNER SECTION **0 dB = 1 µV**

Cautions during repair

When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

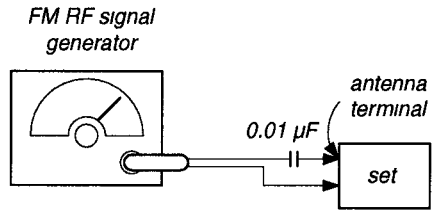
Note on Adjustment

The adjustments of tuner section, should be performed according to the following sequence.
1. FM Auto Scan/Stop Level Adjustment
2. FM Stereo Separation Adjustment
3. AM Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

Setting :

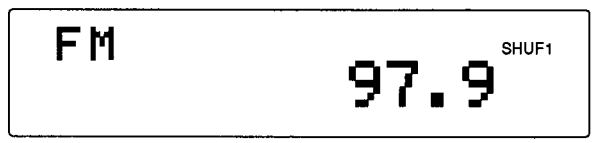
SOURCE button : FM



Carrier frequency . 97.9 MHz
Output level : 22 dB (12.6 µV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

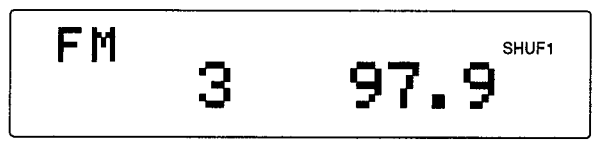
Procedure :
1. Set to the test mode.
2. Push the [SOURCE] button and set to FM

Display



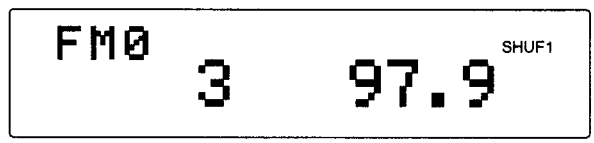
3. Push the preset [3] button.

Display



4 Adjust with the volume RV2 on TU1 so that the "FM" indication turns to "FM0" indication on the display window.
But, in case of already indicated "FM0", turn the RV2 so that put out light "0" indication and adjustment.

Display

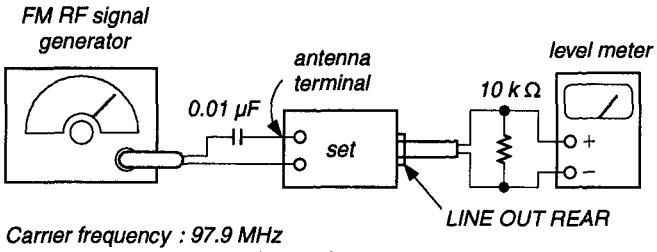


Adjustment Location : See page 23.

FM Stereo Separation Adjustment

Setting :

SOURCE button : FM



Carrier frequency : 97.9 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main : 1 kHz, 33.75 kHz deviation (45%)
sub : 1 kHz, 33.75 kHz deviation (45%)
19 kHz pilot : 7.5 kHz deviation (10%)

Procedure :

FM stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TU1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TU1 for minimum reading.

L-CH stereo separation : Ⓐ – Ⓑ
R-CH stereo separation : Ⓒ – Ⓓ
The separations of both channels should be equal.

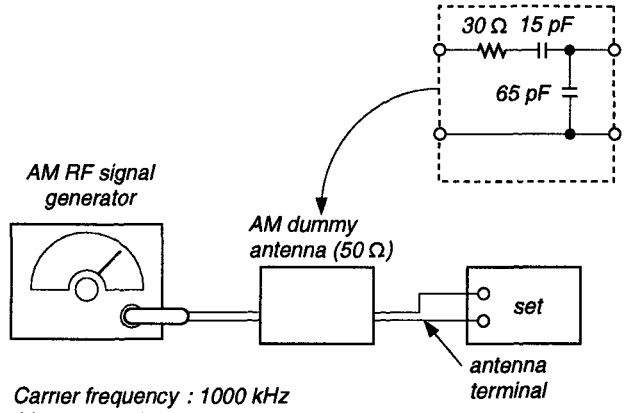
Specification : Separation more than 28 dB

Adjustment Location : See page 23.

AM Auto Scan/Stop Level Adjustment

Setting :

SOURCE → MODE button : AM

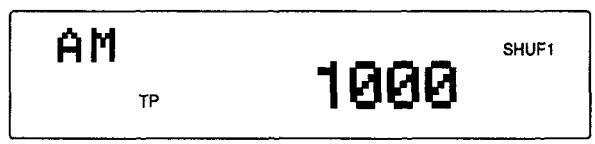


Carrier frequency : 1000 kHz
30% amplitude modulation by 1 kHz signal
output level : 33 dB (44.7 µV)

Procedure :

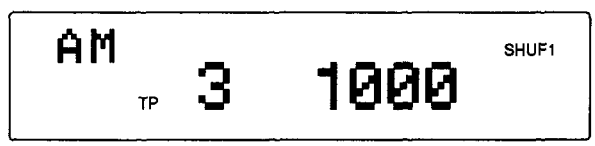
1. Set to the test mode. (See page 21.)
2. Push the [SOURCE] button.
3. Push the [MODE] button and set to AM.

Display



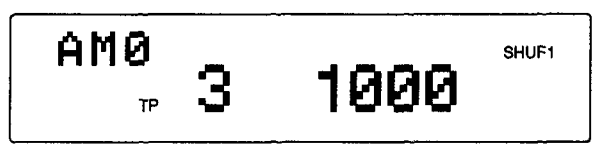
4. Push the preset [3] button.

Display



5. Adjust with the volume RV1 on TU1 so that the "AM" indication turns to "AM0" indication on the display window.
   But, in case of already indicated "AM0", turn the RV1 so that put out light "0" indication and adjustment.

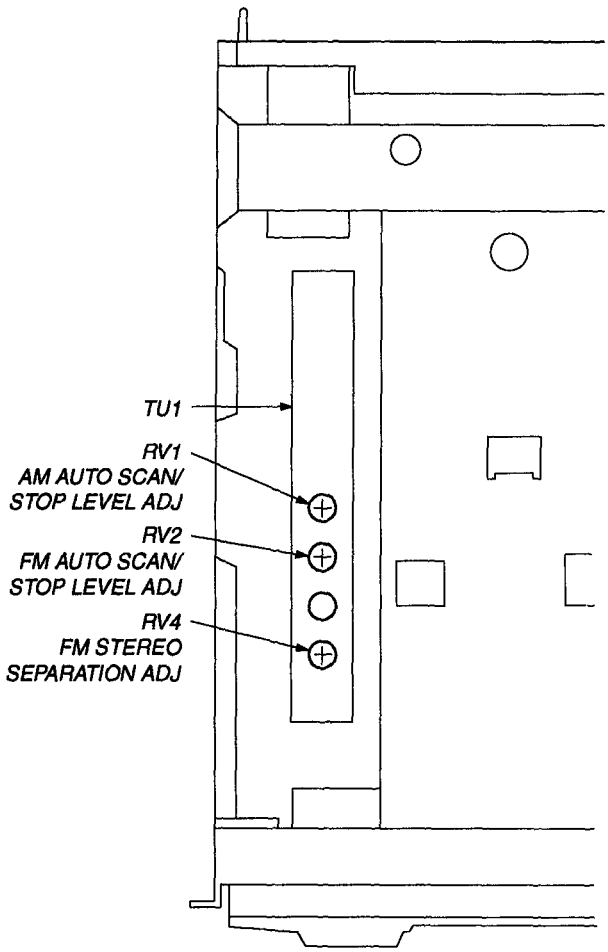
Display



Adjustment Location : See page 23.

Adjustment Location : tuner unit (TU1)

–set upper view–



CD SECTION

CD section adjustments are done automatically in this set.

SECTION 4
DIAGRAMS

4-1. IC PIN DESCRIPTIONS

• IC501 CXD2548R (DIGITAL SERVO, DIGITAL SIGNAL PROCESSOR)

Pin No.	Pin Name	I/O	Pin Description
1	SYSM	I	System mute input (Not used.)
2	RMUT1	O	R-ch, "0" detection output ("H" : ON, "L" : OFF) (Not used.)
3	LMUT2	O	L-ch, "0" detection output. ("H" : ON, "L" : OFF) (Not used)
4	CKOUT	O	Master clock frequency division output (Not used.)
5	VDD0	—	Digital power supply
6	SBSO	O	Serial output of sub-P to W. (Not used.)
7	EXCK	I	Clock input for SBSO read output. (Not used.)
8	SQCK	I	Clock input for SQSO read output.
9	SQSO	O	SubQ 80 bit, PCM peak and level data 16 bit output.
10	SENS	O	SENS output. Output to CPU.
11	SCLK	I	Clock input for SENS real data read.
12	DATA	I	Serial data input from CPU.
13	XLAT	I	Latch input from CPU. Latch serial data at the falling edge.
14	CLOK	I	Serial data transfer clock input from CPU.
15	XRST	I	System reset ("L" : Reset)
16	ACDT	O	Not used.
17	PWM1	I	External control input of spindle motor
18	XLON	O	Microcomputer extension interface (Output) (Not used.)
19	SPOA	I	Microcomputer extension interface (Input A) (Not used.)
20	WFCK	O	WFCK (Write Flame Clock) output
21	GTOP	O	GTOP output
22	XUGF	O	XUGF output (Not used.)
23	XPCK	O	XPLCK output (Not used.)
24	GFS	O	GFS output
25	RFCK	O	RFCK output
26	C2PO	O	C2PO output (Not used)
27	XROF	O	XROF output
28	SCOR	O	H" output at either detection, sub code sync S0 or S1
29	MNT0	O	MNT0 output (Not used.)
30	MNT1	O	MNT1 output (Not used.)
31	MNT3	O	MNT3 output (Not used.)
32	VSS1	—	Digital GND
33	DOUT	O	Digital-Out output
34	ATSK	I	For anti-shock.
35	MIRR	O	Mirror signal output (Not used.)
36	DFCT	O	Diffect signal output (Not used.)
37	FOK	O	Focus OK signal output
38	VDD1	—	Digital power supply
39	VPCO1	O	Charge pump output for wideband EFM PLL.
40	VPCO2	O	VCO2 charge pump output for wideband EFM PLL.
41	VCK.I	I	VCO2 oscillator input for wideband EFM PLL
42	V16M	O	VCO2 oscillator output for wideband EFM PLL.
43	VCTL	I	VCO2 control input for wideband EFM PLL.
44	PCO	O	Charge pump output for master PLL.
45	FILO	O	Filter output for master PLL (slave = digital PLL).
46	FILI	I	Filter input for master PLL.

Pin No.	Pin Name	I/O	Pin Description
47	AVSS4	—	Analog GND
48	CLTV	I	VCO control voltage input for master.
49	AVDD4	—	Analog power supply
50	RFAC	I	EFM signal input
51	BIAS	I	Asymmetry circuit constant current input
52	ASY.I	I	Asymmetry comparate voltage input
53	ASY.O	O	EFM full-swing output ("L" : VSS, "H" : VDD)
54	VC	I	Center voltage input
55	FE	I	Focus error signal input
56	SE	I	Sled error signal input
57	TE	I	Tracking error signal input
58	CE	I	Center error signal input
59	RFDC	I	RF signal input
60	RFC	I	Condenser connection pin for LPF time constant of RF signal.
61	ADIO	O	OP amplifier output (Not used.)
62	AVSS3	—	Analog GND
63	IGEN	I	Current source reference resistor connection for OP amplifier
64	AVDD3	—	Analog power supply
65, 66	TES2, 3	I	TEST pin (Fixed at "L".)
67	VSS2	—	Digital GND
68	TEST	I	TEST pin (Fixed at "L")
69	SFDR	O	Sled drive output
70	SRDR	O	Sled drive output
71	TFDR	O	Tracking drive output
72	TRDR	O	Tracking drive output
73	FFDR	O	Focus drive output
74	FRDR	O	Focus drive output
75	VDD2	—	Digital power supply
76	COUT	O	Track number count signal output (Not used)
77	LOCK	O	Not used.
78	MDS	O	Servo control output of spindle motor. (Not used.)
79	MDP	O	Servo control output of spindle motor.
80	SSTP	I	Disc most inner track detection signal input
81	FSTO	O	2/3 frequency division output of pins 103 and 104.
82	FSTI	I	Reference clock input for digital servo.
83	XTSL	I	X'tal select input ("L" : 16.9344 MHz)
84	C4M	O	4.2336 MHz output
85	WDCK	O	D/A interface. Word clock f = 2Fs
86	VDD3	—	Digital power supply
87	LRCK	O	D/A interface. LR clock f = Fs
88	LRCKI	I	LR clock input to DAC. (48 bit slot) (Not used.)
89	PCMD	O	D/A interface. Serial data (2's COMP, MSB first)
90	PCMDI	I	Audio data input to DAC. (48 bit slot) (Not used.)
91	BCK	O	D/A interface. Bit clock
92	BCKI	I	Bit clock input to DAC. (48 bit slot) (Not used)
93	EMPH	O	Not used.
94	EMPHI	I	De-emphasis ON/OFF of DAC. ("H" : ON, "L" : OFF) (Not used)

Pin No.	Pin Name	I/O	Pin Description
95	VSS3	—	Digital GND
96	AVSS1	—	L-ch, Analog GND.
97	AVDD1	—	L-ch, Analog power supply.
98	AOUT1	O	L-ch, Analog output. (Not used.)
99	AIN1	I	L-ch, OP amplifier input. (Not used.)
100	LOUT1	O	L-ch, LINE output. (Not used.)
101	AVSS1	—	L-ch, Analog GND.
102	XVDD	—	Analog power supply for master clock.
103	XTAI	I	X'tal oscillator input of master clock (16.9344 MHz)
104	XTAO	O	X'tal oscillator output of master clock. (Not used.)
105	XVSS	—	Analog GND for master clock. (Not used.)
106	AVSS2	—	R-ch, Analog GND.
107	ROUT2	O	R-ch, LINE output. (Not used.)
108	AIN2	I	R-ch, OP amplifier input. (Not used.)
109	AOUT2	O	R-ch, Analog output. (Not used.)
110	AVDD2	—	R-ch, Analog power supply.
111	AVSS2	—	R-ch, Analog GND.
112	VSS0	—	Digital GND

• IC601 MN1883220Y5A (TUNER SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1 – 6	NCO	—	Not used.
7	VDD	—	Power supply pin
8	X1	I	Ceramic oscillator connection input pin (8 MHz)
9	X2	O	Ceramic oscillator connection output pin (8 MHz)
10	GND	—	GND
11	XTI	I	Connect to GND.
12	XTO	O	Not used.
13	X0	—	Connect to GND
14	$\overline{\text{RESET}}$	I	Reset input pin
15	RDS-CLK	I	RDS clock input pin (Fixed at "L".)
16	BU-CHECK	I	Back-up detection input pin
17	BUS-ON-IN	I	Bus interface bus on input pin
18 – 29	NCO	—	Not used.
30	RDS-DATA	I	RDS data input pin (Fixed at "L".)
31	NIL	I	Fixed at "L".
32	AM-ST-IN	I/O	AM STEREO indicator input/output pin (Fixed at "L".)
33 – 35	NCO	—	Not used
36, 37	NIL	I	Connect to GND.
38	DI	I	PLL data input pin
39	DO	O	PLL data output pin
40	CLK	O	PLL clock output pin
41	CE	O	PLL chip enable output pin
42	RQ	O	Bus interface request output pin
43	LINK-OFF	O	Bus interface link output pin
44	SCK	I	Bus interface serial clock-in input pin
45	SI	I	Bus interface serial data-in input pin
46	SO	I/O	Bus interface serial data-out input/output pin
47	VDD	—	Power supply pin
48	AVDD	—	Power supply pin for A/D conversion input.
49	VREF	—	Reference voltage input pin for A/D conversion input. (+ side)
50	—	I	Fixed at "L".
51	—	I	Fixed at "H".
52	SRAM-RST	I	RAM reset detection input pin.
53	MUTE-SEL	I	Mute operation select pin (Fixed at "H".)
54	DSTSEL1	I	Destination select setting pin (Fixed at "L")
55	DSTSEL0	I	Destination select setting pin (Fixed at "H".)
56	AM-VSM	I	AM S-meter voltage detection input pin
57	FM-VSM	I	FM S-meter voltage detection input pin
58	VREF	—	Reference voltage input pin for A/D conversion input. (- side)
59	—	—	GND for A/D conversion input
60	VSS	—	GND
61	TU-ON	O	TUNER-ON output pin
62	LO/$\overline{\text{DX}}$	O	DX/LOCAL output pin (Fixed at "L" : DX)
63	$\overline{\text{SEEK-OUT}}$	O	SEEK OUT output pin
64	AM-ON	O	AM-ON output pin (Fixed at "L".)
65	FM-ON	O	FM-ON output pin

Pin No.	Pin Name	I/O	Pin Description
66	TUNER-MUTE	O	MUTE output pin
67	AF-SEEK	I	Not used.
68	SRAM	I	Fixed at "L".
69	A15	—	Not used.
70	ST	I/O	ST indicator input/MONO output
71	SD-IN	I	Signal detecter input pin
72 – 80	NCO	—	Not used.

• IC701 µPD78058GC-453-3B9 (MAIN SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1	RE-IN1	I	Rotary encoder (VOLUME) input
2, 3	NIL	I	Connect to GND.
4	AVSS	—	GND for A/D conversion.
5	LCDANG	O	Output for LCD view angle adjustment.
6	NIL	I	Connect to GND.
7	AVREF	—	Reference voltage for D/A conversion.
8 – 11	NIL	I	Connect to GND.
12	LCDSO	O	LCD serial data output
13	LCDCKO	O	LCD serial clock output
14	LCDCE	O	LCD serial chip enable output
15	NIL	I	Connect to GND.
16	UNISI	I	Serial data input
17	UNISO	O	Serial data output
18	UNICKI	I	Serial clock input
19	UNICKO	O	Serial clock output
20	$\overline{\text{BUSON}}$	O	BUS ON control output
21	LCD-ON	O	LCD driver power control output
22	PW-ON	O	System power control output
23	LAMP-ON	O	Lamp power control output
24	AMP-STBY	O	Power amplifier standby control output
25	BST-ON	O	Power amplifier boost control output
26	NCO	—	Not used.
27	$\overline{\text{SYSRST}}$	O	System reset control output
28	NIL	I	Connect to GND.
29	VOLSO	O	Electric volume serial data output
30	VOLCKO	O	Electric volume serial clock output
31	VOLCE	O	Electric volume serial chip enable output
32	$\overline{\text{ILL-IN}}$	I	Illuminator detection input
33	VSS	—	GND for microcomputer
34	CD-TEXT	I	CD TEXT correspondence with/without setting (Fixed at "H".)
35	DSPSEL	I	Initial setting input (Fixed at "H".)
36	$\overline{\text{TELMUT}}$	I	Telephone mute detection input
37	$\overline{\text{TEST}}$	I	TEST mode direct setting
38	PW-SEL	I	Power select initial setting
39	$\overline{\text{NOSESW}}$	I	Detachable panel detection
40	A-MUT	O	Audio mute control output
41	$\overline{\text{AMPMUT}}$	O	Power amplifier mute control output
42	$\overline{\text{AD-ON}}$	O	Power control output for A/D conversion.
43 – 45	NIL	I	Connect to GND.
46	BEEP	O	Buzzer control output
47 – 55	NIL	I	Connect to GND.
56	$\overline{\text{ACCIN}}$	I	Accessory power voltage detection input
57	$\overline{\text{EQ-SEL}}$	I	Equalizer connection with/without initial setting
58, 59	NIL	I	Connect to GND.
60	$\overline{\text{RESET}}$	I	Reset input
61	SIRCS	I	Remote commander input

Pin No.	Pin Name	I/O	Pin Description
62	$\overline{\text{BU-IN}}$	I	Back-up power detection input
63	KEYACK	I	Key input acknowledge (WAKE UP)
64 – 66	NIL	I	Connect to GND.
67	TIMPOL	I	Time poling with/without setting input (Connect to GND.)
68	VDD	—	Power supply for microcomputer.
69	XOUT	O	Main crystal oscillator output pin (5 MHz)
70	XIN	I	Main crystal oscillator input pin (5 MHz)
71	GND	—	GND for microcomputer.
72	XT2	O	Sub crystal oscillator output pin (32.768 kHz)
73	XT1	I	Sub crystal oscillator input pin (32.768 kHz)
74	AVDD	—	Power supply for A/D conversion
75	AVREF	—	Reference power supply for A/D conversion.
76, 77	KEYIN0, 1	I	Key input
78, 79	RC-IN1, 2	I	Rotary commander input 1, 2
80	RE-IN0	I	Rotary encoder (VOLUME) input

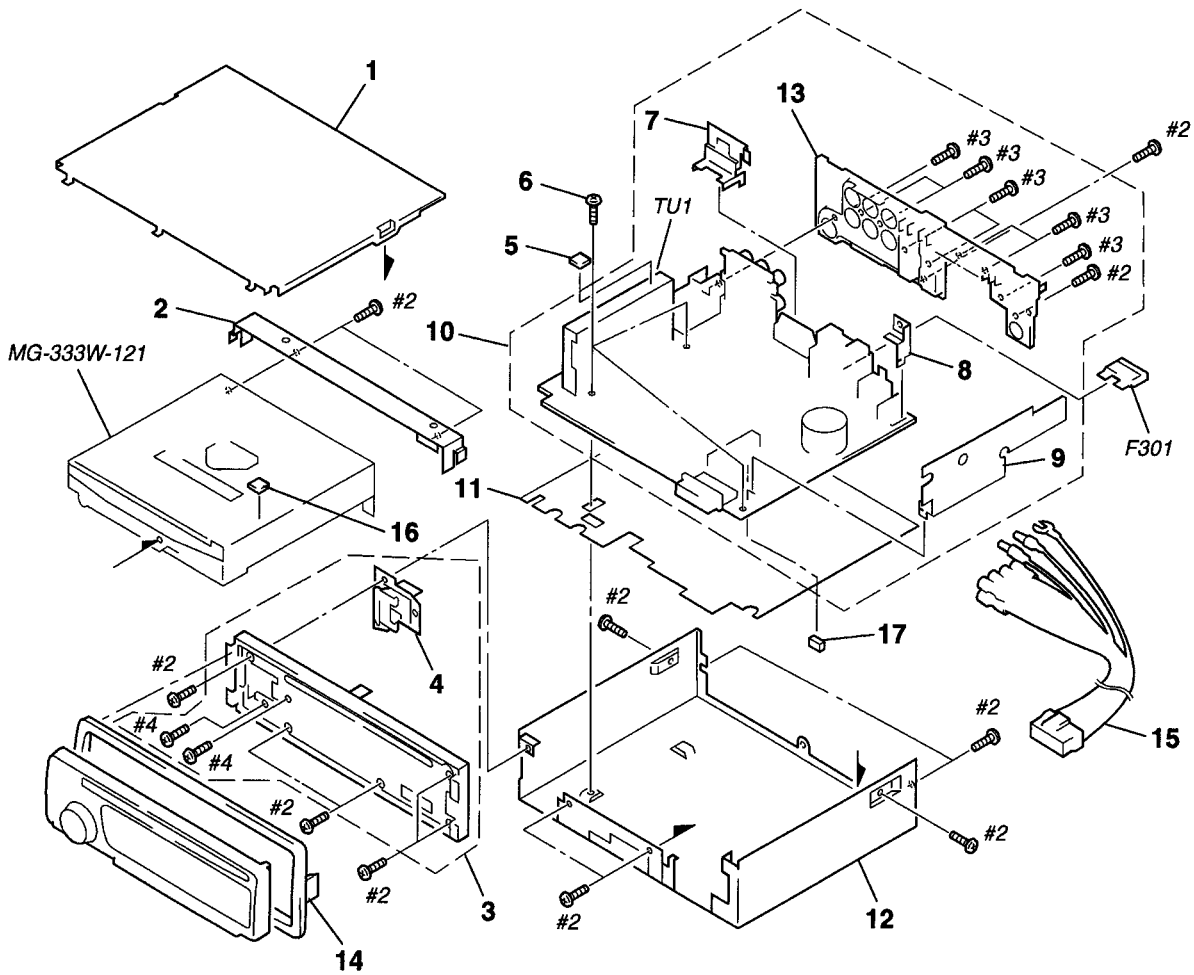
SECTION 5
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied
- Items marked "*" are not stocked since they are seldom required for routine service Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

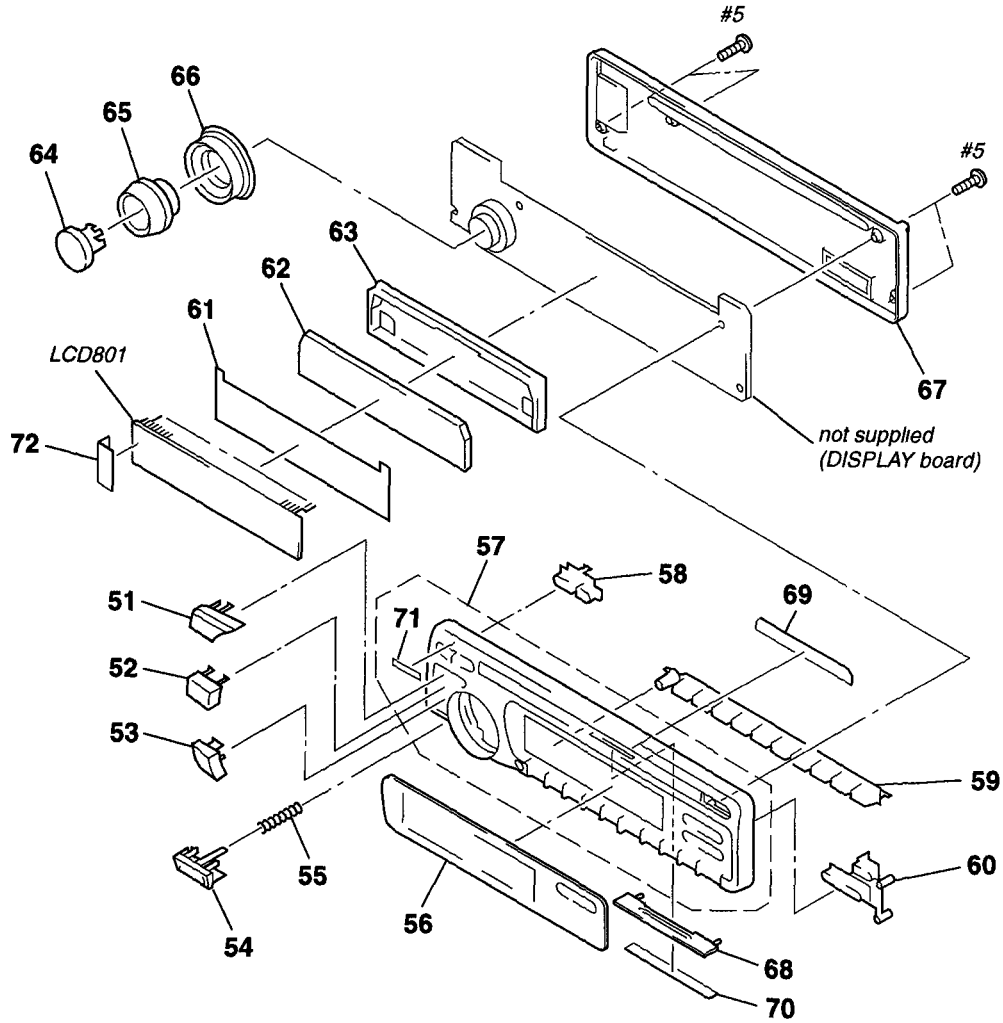
5-1. CHASSIS SECTION



Ref. No	Part No	Description	Remark
* 1	X-3372-975-1	COVER ASSY	
* 2	3-008-664-01	BRACKET (MD)	
3	X-3372-974-1	PANEL ASSY, SUB	
4	X-3367-636-1	LOCK ASSY	
* 5	3-924-145-01	CUSHION (TU), RUBBER	
6	3-915-923-01	SCREW, GROUND POINT	
* 7	3-008-665-01	BRACKET (IC)	
* 8	3-010-436-01	BRACKET (H)	
* 9	3-014-349-01	HEAT SINK (REG3)	
* 10	A-3294-252-A	MAIN BOARD, COMPLETE	

Ref No	Part No	Description	Remark
* 11	3-010-437-01	SHEET, INSULATING	
* 12	3-009-810-21	CHASSIS	
* 13	3-008-663-11	HEAT SINK	
14	3-932-910-01	COLLAR (CDX)	
15	1-776-207-11	CORD (WITH CONNECTOR) (POWER)	
16	2-389-320-01	RUBBER (A)	
* 17	3-342-925-01	CUSHION, RUBBER	
F301	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
TU1	A-3282-029-A	TUNER UNIT (TUX-006/2 (E))	

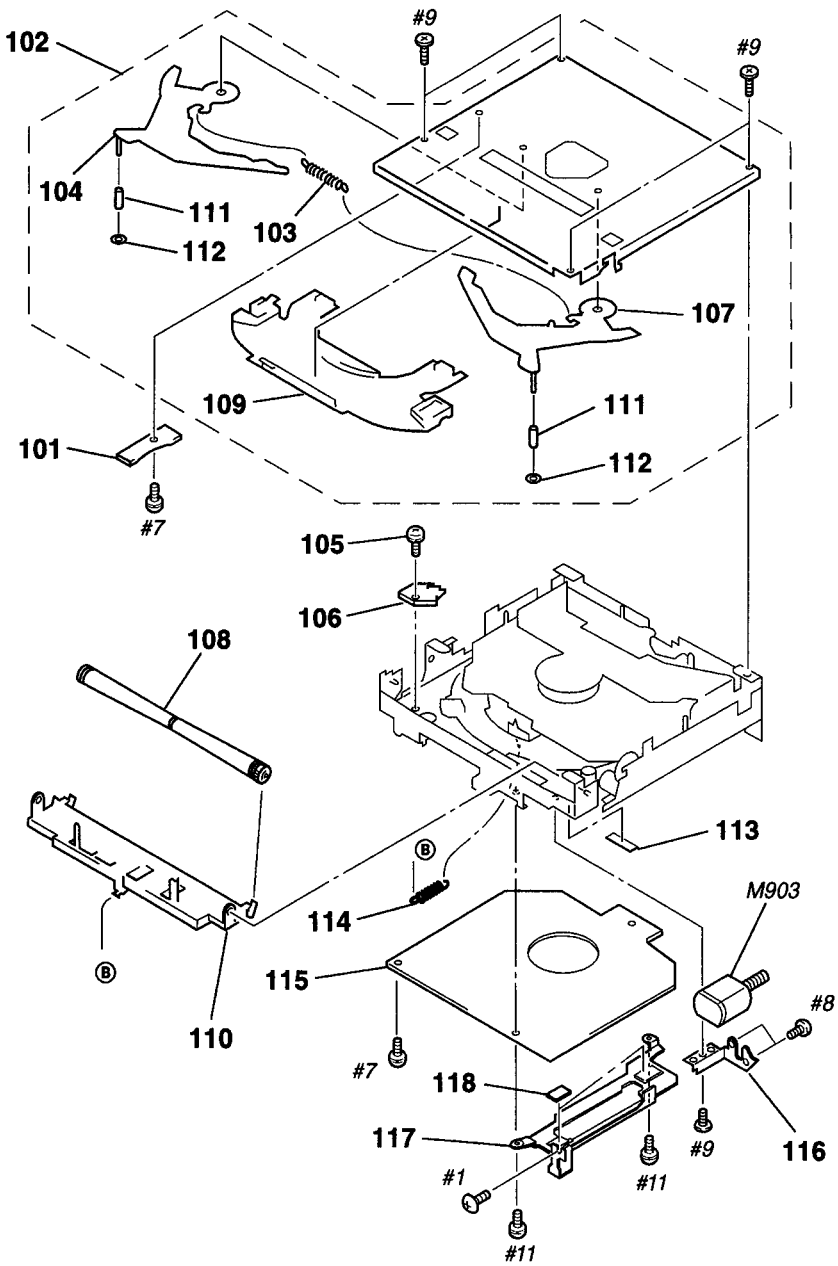
5-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-010-432-01	BUTTON (+)	
52	3-010-433-01	BUTTON (MODE)	
53	3-010-434-01	BUTTON (-)	
54	3-010-431-01	BUTTON (RELEASE)	
55	3-008-667-01	SPRING (RELEASE)	
56	X-3373-318-1	WINDOW ASSY	
57	X-3372-978-1	PANEL ASSY, FRONT	
58	3-010-430-01	BUTTON (SOUND)	
59	3-932-892-01	BUTTON (10 KEY)	
60	3-008-660-11	BUTTON (EJECT)	
* 61	3-009-268-01	SHEET, DIFFUSION	
* 62	3-010-426-01	PLATE (LCD), LIGHT GUIDE	

Ref. No.	Part No	Description	Remark
* 63	3-010-427-01	HOLDER (LCD)	
64	X-3373-271-1	BUTTON (SOURCE) ASSY	
65	3-010-713-01	KNOB	
66	3-010-714-01	PLATE (RING), LIGHT GUIDE	
67	3-010-435-01	PANEL, BACK	
68	3-932-889-01	PLATE (F), LIGHT GUIDE	
69	3-932-898-01	SHEET (F)	
* 70	3-013-531-01	SHEET (CD)	
71	3-904-194-01	EMBLEM (NO 2 5), SONY	
* 72	3-014-992-01	SHEET (L)	
LCD801	1-801-660-11	DISPLAY PANEL, LIQUID CRYSTAL	

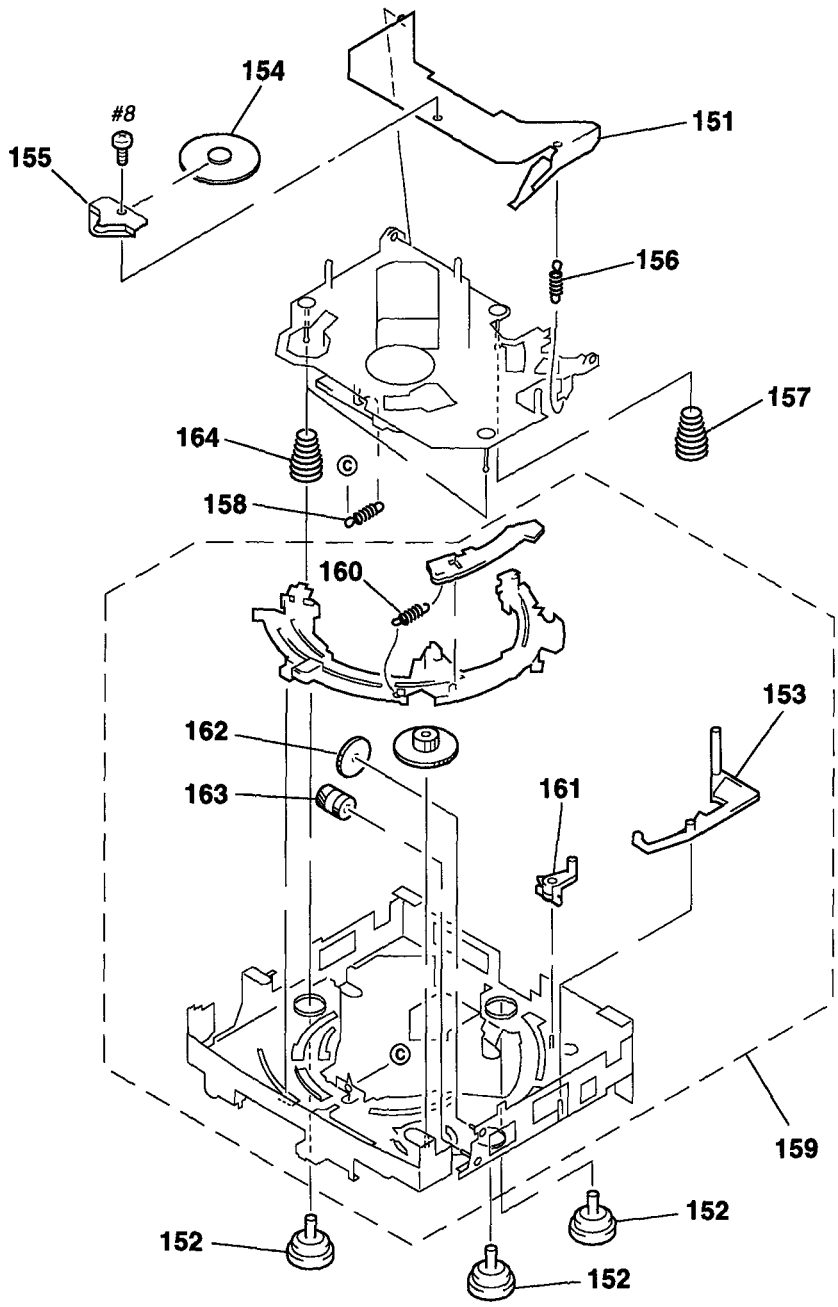
5-3. CD MECHANISM SECTION (1)
(MG-333W-121)



Ref. No.	Part No	Description	Remark
* 101	1-659-836-11	DISC IN SW BOARD	
* 102	A-3291-816-A	CHASSIS (T) SUB ASSY	
103	3-931-909-01	SPRING (LR), TENSION	
104	X-3371-501-1	LEVER (L) ASSY	
105	3-338-737-01	SCREW (2X3), +PS	
* 106	1-659-837-11	LOAD SW BOARD	
107	X-3371-502-1	LEVER (R) ASSY	
108	A-3291-672-A	ROLLER ASSY	
109	3-931-908-01	GUIDE (DISC)	
110	3-931-902-01	ARM (ROLLER)	

Ref. No	Part No	Description	Remark
111	3-936-756-01	ROLLER (D)	
112	3-321-393-01	WASHER, STOPPER	
* 113	3-939-139-01	SPACER	
114	3-931-916-01	SPRING (RA), TENSION	
* 115	A-3309-717-A	SERVO BOARD, COMPLETE	
* 116	3-007-530-01	BRACKET (MOTOR)	
* 117	3-013-387-01	HEAT SINK	
* 118	3-014-262-01	SHEET (HEAT SINK)	
M903	A-3291-676-A	MOTOR SUB ASSY, LOADING	

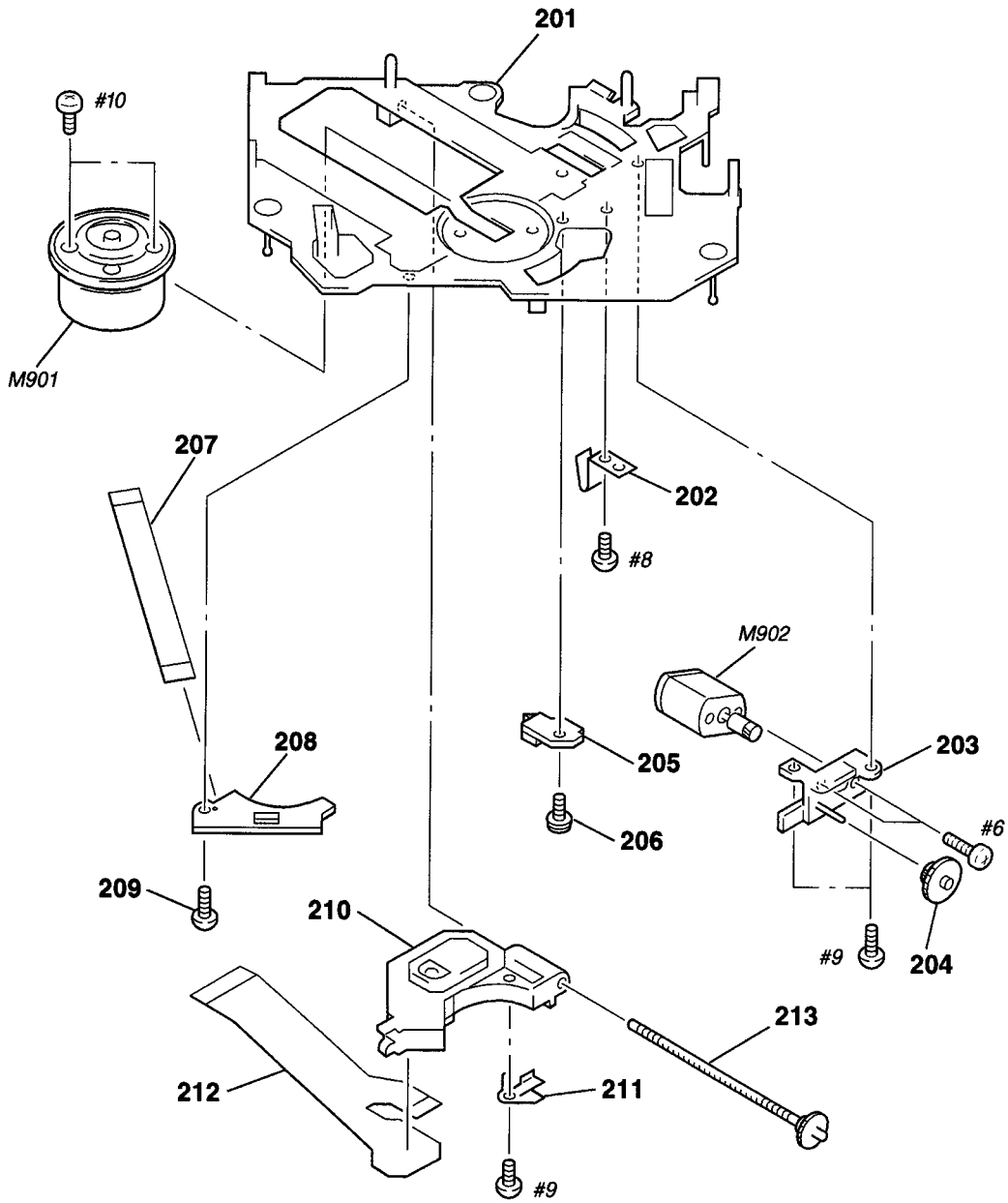
5-4. CD MECHANISM SECTION (2)
(MG-333W-121)



Ref. No.	Part No	Description	Remark
151	3-931-893-01	ARM, CHUCKING	
152	3-931-897-01	DAMPER (T)	
153	3-931-879-02	LEVER (D)	
* 154	3-913-404-11	RETAINER (DISC)	
155	3-931-894-01	BRACKET (CP)	
156	3-931-895-01	SPRING (CH), TENSION	
157	3-931-898-01	SPRING (FL), COMPRESSION	

Ref. No	Part No	Description	Remark
158	3-931-914-01	SPRING (ANGLE), TENSION	
* 159	A-3291-677-A	CHASSIS (M) ASSY, COMPLETE	
160	3-931-883-01	SPRING (TR), TENSION	
161	3-931-881-01	LEVER (LOCK)	
162	3-931-882-02	GEAR (MDL)	
163	3-007-537-01	WHEEL (U), WORM	
164	3-931-898-11	SPRING (FL), COMPRESSION	

5-5. CD MECHANISM SECTION (3)
(MG-333W-121)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No	Description	Remark
* 201	X-3371-503-1	CHASSIS (OP) (O/S) ASSY	
202	3-931-829-01	SPRING (SL), PLATE	
203	X-3371-504-1	BASE (DRIVING) ASSY	
204	3-931-832-01	GEAR (SL MIDWAY)	
* 205	1-659-835-12	LIMIT SW BOARD	
206	3-338-737-01	SCREW (2X3), + PS	
207	1-659-880-11	MOTOR FLEXIBLE BOARD	
* 208	1-659-834-11	SUB BOARD	
209	3-909-607-01	SCREW	
⚠210	8-848-402-02	PICK-UP, OPTICAL KSS-520A/J2NP	
211	3-931-834-01	SPRING (FEED), PLATE	
212	1-659-881-11	PICK-UP FLEXIBLE BOARD	
213	A-3291-669-A	SHAFT (FEED) ASSY	
M901	X-3373-096-1	MOTOR ASSY (SPINDLE)	
M902	A-3301-107-A	MOTOR ASSY, SLED	

SECTION 6
ELECTRICAL PARTS LIST

DISC IN SW **DISPLAY**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items
- SEMICONDUCTORS
  In each case, u : μ, for example:
  uA.. : μA.. uPA.. : μPA
  uPB.. : μPB.. uPC.. : μPC . uPD · μPD
- CAPACITORS
  uF : μF
- COILS
  uH : μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	1-659-836-11	DISC IN SW BOARD			
		**********			
		< SWITCH >			
SW1	1-572-288-11	SWITCH, PUSH (DISC IN)			
SW2	1-572-288-11	SWITCH, PUSH (SELF)			
**********					
		DISPLAY BOARD			
		**********			
		< CAPACITOR >			
C801	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C802	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C804	1-164-489-11	CERAMIC CHIP	0 22uF	10%	16V
C805	1-164-489-11	CERAMIC CHIP	0 22uF	10%	16V
C806	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
		< CONNECTOR >			
CNP801	1-764-423-11	PIN, CONNECTOR 12P			
		< DIODE >			
D801	8-719-977-12	DIODE DTZ6.8B			
D802	8-719-977-12	DIODE DTZ6.8B			
D803	8-719-977-12	DIODE DTZ6.8B			
D804	8-719-420-51	DIODE MA729			
D805	8-719-420-90	DIODE MA8051-M			
D806	8-719-420-90	DIODE MA8051-M			
D807	8-719-420-90	DIODE MA8051-M			
D808	8-719-420-90	DIODE MA8051-M			
		< IC >			
IC801	8-759-331-68	IC uPD16432AGC-011-9EU			
IC802	8-749-012-17	IC RS-140-T			
		< LIQUID CRYSTAL DISPLAY >			
LCD801	1-801-660-11	DISPLAY PANEL, LIQUID CRYSTAL			

Ref No	Part No	Description	Remark
		< DIODE >	
LED801	8-719-987-45	LED CL-155Y/PG-CD (SOURCE)	
LED802	8-719-987-45	LED CL-155Y/PG-CD (SOURCE)	
LED803	8-719-987-45	LED CL-155Y/PG-CD (SOURCE)	
LED804	8-719-987-45	LED CL-155Y/PG-CD (SOURCE)	
LED805	8-719-987-45	LED CL-155Y/PG-CD (SOURCE)	
LED806	8-719-987-45	LED CL-155Y/PG-CD (SOURCE)	
LED902	8-719-059-80	LED CL-170TY-CD-T (SOURCE)	
LED903	8-719-033-14	LED CL-170PG-CD-T (SOURCE)	
		< SWITCH >	
LSW801	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (⏏)	
LSW802	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (LIST)	
LSW803	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (DSPL)	
LSW806	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (10)	
LSW807	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (9)	
LSW808	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (8)	
LSW809	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (7)	
LSW810	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (6)	
LSW811	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (5)	
LSW812	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (4)	
LSW813	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (3)	
LSW814	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (2)	
LSW815	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (1)	
LSW816	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (OFF)	
LSW817	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)	
LSW818	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SHIFT)	
LSW819	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (⏮ ◀◀ - (SEEK/AMS))	
LSW820	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (MODE)	
LSW821	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (⏭ ▶▶ + (SEEK/AMS))	
LSW822	1-762-620-11	SWITCH, KEY BOARD (WITH LED) (SOUND)	
		< PILOT LAMP >	
PL801	1-517-630-31	LAMP, PILOT	
PL802	1-517-630-31	LAMP, PILOT	

DISPLAY | LIMIT SW | LOAD SW

Ref. No.	Part No	Description	Remark
		< TRANSISTOR >	
Q803	8-729-904-78	TRANSISTOR DTD113ZK	
Q804	8-729-904-66	TRANSISTOR DTD113EK	
Q805	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q806	8-729-106-60	TRANSISTOR 2SB1115A	
Q807	8-729-106-60	TRANSISTOR 2SB1115A	
		< RESISTOR >	
R801	1-216-647-11	METAL CHIP 680 0 5% 1/10W	
R802	1-216-647-11	METAL CHIP 680 0.5% 1/10W	
R803	1-216-647-11	METAL CHIP 680 0.5% 1/10W	
R804	1-208-437-41	METAL GLAZE 1K 2% 1/10W	
R805	1-216-655-11	METAL CHIP 1 5K 0 5% 1/10W	
R806	1-216-655-11	METAL CHIP 1 5K 0 5% 1/10W	
R807	1-208-445-41	METAL GLAZE 2 2K 2% 1/10W	
R808	1-208-449-41	METAL GLAZE 3.3K 2% 1/10W	
R809	1-208-453-41	METAL GLAZE 4 7K 2% 1/10W	
R810	1-216-671-11	METAL CHIP 6.8K 0.5% 1/10W	
R811	1-208-462-41	METAL GLAZE 10K 2% 1/10W	
R812	1-208-810-11	METAL GLAZE 15K 2% 1/10W	
R813	1-208-518-41	METAL GLAZE 22K 2% 1/10W	
R814	1-208-526-41	METAL GLAZE 47K 2% 1/10W	
R815	1-216-647-11	METAL CHIP 680 0.5% 1/10W	
R816	1-216-647-11	METAL CHIP 680 0 5% 1/10W	
R817	1-216-647-11	METAL CHIP 680 0 5% 1/10W	
R818	1-208-437-41	METAL GLAZE 1K 2% 1/10W	
R819	1-216-655-11	METAL CHIP 1.5K 0 5% 1/10W	
R820	1-216-655-11	METAL CHIP 1 5K 0 5% 1/10W	
R822	1-216-033-00	METAL CHIP 220 5% 1/10W	
R823	1-216-037-00	METAL CHIP 330 5% 1/10W	
R824	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R825	1-216-029-00	METAL CHIP 150 5% 1/10W	
R826	1-216-029-00	METAL CHIP 150 5% 1/10W	
R827	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R832	1-216-029-00	METAL CHIP 150 5% 1/10W	
R833	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R834	1-216-029-00	METAL CHIP 150 5% 1/10W	
R835	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R836	1-216-037-00	METAL CHIP 330 5% 1/10W	
R837	1-216-033-00	METAL CHIP 220 5% 1/10W	
R841	1-216-041-00	METAL CHIP 470 5% 1/10W	
R842	1-216-057-00	METAL CHIP 2 2K 5% 1/10W	
R843	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R844	1-216-057-00	METAL CHIP 2 2K 5% 1/10W	
R845	1-216-057-00	METAL CHIP 2 2K 5% 1/10W	
R846	1-216-053-00	METAL CHIP 1 5K 5% 1/10W	
R849	1-216-037-00	METAL CHIP 330 5% 1/10W	
R850	1-216-033-00	METAL CHIP 220 5% 1/10W	

Ref No	Part No	Description	Remark
R852	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R853	1-216-033-00	METAL CHIP 220 5% 1/10W	
R854	1-216-041-00	METAL CHIP 470 5% 1/10W	
R855	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R856	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R857	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R858	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R859	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R860	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R863	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R865	1-216-190-00	METAL GLAZE 470 5% 1/8W	
R866	1-216-186-00	METAL GLAZE 330 5% 1/8W	
R871	1-216-057-00	METAL CHIP 2 2K 5% 1/10W	
R872	1-216-057-00	METAL CHIP 2 2K 5% 1/10W	
R873	1-216-057-00	METAL CHIP 2 2K 5% 1/10W	
R874	1-216-065-00	METAL CHIP 4 7K 5% 1/10W	
R875	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R876	1-216-065-00	METAL CHIP 4 7K 5% 1/10W	
R877	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R878	1-216-041-00	METAL CHIP 470 5% 1/10W	
R879	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R888	1-216-057-00	METAL CHIP 2 2K 5% 1/10W	
		< ROTARY ENCODER >	
RE801	1-475-014-11	ENCODER, ROTARY	
		< THERMISTOR >	
TH801	1-810-421-11	THERMISTOR NTH5G36B103K01TE	

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*	1-659-835-12	LIMIT SW BOARD **********	
		< SWITCH >	
SW3	1-572-688-11	SWITCH, PUSH (1 KEY) (LIMIT)	

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*	1-659-837-11	LOAD SW BOARD **********	
		< SWITCH >	
SW4	1-572-288-11	SWITCH, PUSH (DOWN)	

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Ref. No	Part No	Description			Remark
*	A-3294-252-A	MAIN BOARD, COMPLETE			
		**********			
*	3-010-436-01	BRACKET (H)			
*	3-014-349-01	HEAT SINK (REG3)			
	7-685-792-09	SCREW +PTT 2.6X6 (S)			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
		< BUZZER >			
BZ700	1-504-920-11	BUZZER			
		< CAPACITOR >			
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C4	1-124-589-11	ELECT	47uF	20%	16V
C5	1-164-182-11	CERAMIC CHIP	0 0033uF	10%	50V
C7	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C8	1-136-153-00	FILM	0 01uF	5%	50V
C9	1-130-475-00	MYLAR	0.0022uF	5%	50V
C10	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C11	1-136-173-00	FILM	0 47uF	5%	50V
C12	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C13	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C14	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C15	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C17	1-124-589-11	ELECT	47uF	20%	16V
C18	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C19	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C20	1-126-933-11	ELECT	100uF	20%	10V
C21	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C22	1-126-933-11	ELECT	100uF	20%	10V
C23	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C24	1-126-933-11	ELECT	100uF	20%	10V
C25	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C32	1-164-346-11	CERAMIC CHIP	1uF		16V
C33	1-124-589-11	ELECT	47uF	20%	16V
C37	1-163-213-00	CERAMIC CHIP	0 0022uF	5%	50V
C40	1-165-176-11	CERAMIC CHIP	0 047uF	10%	16V
C41	1-163-009-11	CERAMIC CHIP	0 001uF	10%	50V
C42	1-124-589-11	ELECT	47uF	20%	16V
C51	1-163-989-11	CERAMIC CHIP	0 033uF	10%	25V
C52	1-164-299-11	CERAMIC CHIP	0 22uF	10%	25V
C53	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C55	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C59	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C63	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C65	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C69	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C102	1-115-664-11	ELECT	2 2uF	20%	50V
C105	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C106	1-135-179-21	TANTAL CHIP	2 2uF	20%	16V
C107	1-163-809-11	CERAMIC CHIP	0 047uF	10%	25V
C108	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C109	1-104-946-11	ELECT	10uF	20%	35V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-104-946-11	ELECT	10uF	20%	35V
C112	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C113	1-104-946-11	ELECT	10uF	20%	35V
C114	1-104-946-11	ELECT	10uF	20%	35V
C122	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C123	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C126	1-135-179-21	TANTAL. CHIP	2 2uF	20%	16V
C127	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C128	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C129	1-104-563-11	FILM CHIP	0 1uF	5%	16V
C130	1-163-009-11	CERAMIC CHIP	0 001uF	10%	50V
C131	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C132	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C192	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C202	1-115-664-11	ELECT	2 2uF	20%	50V
C205	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C206	1-126-161-11	ELECT	2.2uF	20%	50V
C207	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C208	1-163-017-00	CERAMIC CHIP	0 0047uF	5%	50V
C209	1-104-946-11	ELECT	10uF	20%	35V
C210	1-163-017-00	CERAMIC CHIP	0 0047uF	5%	50V
C211	1-104-946-11	ELECT	10uF	20%	35V
C212	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C213	1-115-655-11	ELECT	10uF	20%	35V
C214	1-115-655-11	ELECT	10uF	20%	35V
C222	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C223	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C226	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C227	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C228	1-104-563-11	FILM CHIP	0 1uF	5%	16V
C229	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C230	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C231	1-163-009-11	CERAMIC CHIP	0 001uF	10%	50V
C232	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C293	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C301	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C302	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C303	1-104-955-11	ELECT	100uF	20%	10V
C304	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C305	1-104-955-11	ELECT	100uF	20%	10V
C307	1-164-346-11	CERAMIC CHIP	1uF		16V
C312	1-126-163-11	ELECT	4.7uF	20%	50V
C313	1-126-161-11	ELECT	2.2uF	20%	50V

MAIN

Ref. No.	Part No	Description			Remark
C314	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C318	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C320	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C321	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C322	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C324	1-115-469-21	ELECT	4700uF	20%	16V
C331	1-104-955-11	ELECT	100uF	20%	10V
C333	1-117-757-11	ELECT	100uF	20%	25V
C350	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C351	1-164-506-11	CERAMIC CHIP	4 7uF		16V
C399	1-164-346-11	CERAMIC CHIP	1uF		16V
C402	1-115-648-11	ELECT	22uF	20%	16V
C404	1-115-648-11	ELECT	22uF	20%	16V
C405	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C406	1-163-038-00	CERAMICCHIP	0.1uF		25V
C407	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C408	1-165-128-11	CERAMIC CHIP	0 22uF		16V
C409	1-115-655-11	ELECT	10uF	20%	35V
C410	1-115-655-11	ELECT	10uF	20%	35V
C411	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C412	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C413	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C414	1-163-215-00	CERAMIC CHIP	0.0027uF	5%	50V
C415	1-163-193-00	CERAMIC CHIP	330PF	5%	50V
C416	1-163-215-00	CERAMIC CHIP	0.0027uF	5%	50V
C417	1-163-193-00	CERAMIC CHIP	330PF	5%	50V
C418	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C419	1-163-077-00	CERAMIC CHIP	0 1uF	10%	25V
C420	1-115-655-11	ELECT	10uF	20%	35V
C424	1-115-666-11	ELECT	4.7uF	20%	50V
C425	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C451	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C452	1-115-651-11	ELECT	100uF	20%	16V
C453	1-126-024-11	ELECT	220uF	20%	25V
C454	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C455	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C458	1-104-955-11	ELECT	100uF	20%	10V
C601	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C602	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C603	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C607	1-126-154-11	ELECT	47uF	20%	6 3V
C608	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C610	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C701	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C702	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C703	1-126-154-11	ELECT	47uF	20%	6.3V
C704	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C705	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C706	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C707	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C708	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C709	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C710	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C751	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C752	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C770	1-164-505-11	CERAMIC CHIP	2 2uF		16V
C771	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C801	1-126-163-11	ELECT	4 7uF	20%	50V
C901	1-164-505-11	CERAMIC CHIP	2 2uF		16V
C902	1-126-157-11	ELECT	10uF	20%	16V
C903	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C904	1-126-157-11	ELECT	10uF	20%	16V
C905	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C906	1-126-157-11	ELECT	10uF	20%	16V
C907	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C910	1-126-163-11	ELECT	4 7uF	20%	50V
C911	1-164-346-11	CERAMIC CHIP	1uF		16V
C912	1-125-701-11	DOUBLE LAYERS	0.047F		5 5V
C913	1-126-933-11	ELECT	100uF	20%	10V
C914	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C915	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C952	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C953	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< JACK >			
CNJ502	1-764-808-14	JACK (ANTENNA)			
CNJ901	1-566-822-41	JACK (REMOTE IN)			
		< CONNECTOR >			
CNP301	1-774-701-11	PIN, CONNECTOR 16P			
CNP302	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN, LINE OUT FRONT/REAR)			
CNP504	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P			
CNP751	1-580-907-31	PLUG, CONNECTOR 8P (BUS CONTROL IN)			
CNP901	1-764-422-11	PLUG, CONNECTOR 12P			
		< DISCHARGE GAP >			
CP1	1-519-504-11	GAP, DISCHARGE			
		< DIODE >			
D1	8-719-981-59	DIODE FC805			
D3	8-719-977-03	DIODE DTZ5 6B			
D301	8-719-421-24	DIODE MA8039-H			
D302	8-719-421-24	DIODE MA8039-H			
D307	8-719-404-49	DIODE MA111			
D308	8-719-977-12	DIODE DTZ6.8B			
D310	8-719-049-38	DIODE 1N5404TU			
D311	8-719-053-18	DIODE 1SR154-400TE-25			
D314	8-719-404-49	DIODE MA111			

Ref. No	Part No.	Description	Remark
D451	8-749-035-90	DIODE MA4091-M(TA)	
D452	8-719-977-03	DIODE DTZ5.6B	
D601	8-719-404-49	DIODE MA111	
D701	8-719-404-49	DIODE MA111	
D702	8-719-914-44	DIODE DAP202K	
D703	8-719-914-44	DIODE DAP202K	
D751	8-719-914-43	DIODE DAN202K	
D752	8-719-422-64	DIODE MA8062-M	
D753	8-719-017-98	DIODE MA8200-TX	
D754	8-719-977-12	DIODE DTZ6 8B	
D755	8-719-017-98	DIODE MA8200-TX	
D801	8-719-801-78	DIODE 1SS184	
D802	8-719-977-12	DIODE DTZ6.8B	
D901	8-719-977-12	DIODE DTZ6 8B	
D902	8-719-801-78	DIODE 1SS184	
D904	8-719-977-12	DIODE DTZ6.8B	
D905	8-719-914-44	DIODE DAP202K	
D906	8-719-977-12	DIODE DTZ6 8B	
D907	8-719-977-12	DIODE DTZ6 8B	
D908	8-719-109-97	DIODE RD6.8ES-B2	
D909	8-719-977-12	DIODE DTZ6 8B	
D910	8-719-109-97	DIODE RD6 8ES-B2	
D911	8-719-034-74	DIODE MA4120-M(TA)	
D912	8-719-109-97	DIODE RD6 8ES-B2	
D914	8-719-109-97	DIODE RD6 8ES-B2	
D915	8-719-109-97	DIODE RD6 8ES-B2	
D916	8-719-404-49	DIODE MA111	
D920	8-719-053-18	DIODE 1SR154-400TE-25	
D921	8-719-053-18	DIODE 1SR154-400TE-25	
D922	8-719-022-90	DIODE MA8160M	
D925	8-719-404-49	DIODE MA111	
D931	8-719-977-12	DIODE DTZ6.8B	
D932	8-719-977-12	DIODE DTZ6.8B	
D951	8-719-914-44	DIODE DAP202K	
D952	8-719-423-23	DIODE MA8110-M	
D953	8-719-423-32	DIODE MA8120-M	
D954	8-719-914-43	DIODE DAN202K	
D955	8-719-404-49	DIODE MA111	
		< FUSE >	
F301	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
		< IC >	
IC201	8-759-711-82	IC NJM4580E	
IC301	8-752-078-67	IC CXA1946BQ-T6	
IC304	8-759-448-61	IC HA13156	
IC401	8-759-185-27	IC PCM1710U-A	
IC402	8-759-700-94	IC NJM5532M	

Ref No	Part No	Description	Remark
IC455	8-759-711-58	IC NJM78L05UA	
IC601	8-759-456-14	IC MN1883220Y5A	
IC602	8-759-448-86	IC TB2114FN(EL)	
IC701	8-759-457-28	IC uPD78058GC-453-3B9	
IC751	8-759-449-89	IC BA8270F-E2	
IC901	8-759-347-50	IC BA3918-V3	
IC902	8-759-443-41	IC RH5VL40AA-T1C	
IC903	8-759-344-91	IC RN5VD23AA-TL	
		< JUMPER RESISTOR >	
JC51	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC52	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC61	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC62	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC70	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC101	1-216-296-00	CONDUCTOR, CHIP (3216)	
JC102	1-216-296-00	CONDUCTOR, CHIP (3216)	
JC103	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC104	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC105	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC106	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC201	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC202	1-216-296-00	CONDUCTOR, CHIP (3216)	
JC203	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC204	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC205	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC206	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC301	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC302	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC306	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC401	1-216-296-00	CONDUCTOR, CHIP (3216)	
JC601	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC651	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC701	1-216-295-00	CONDUCTOR, CHIP (2012)	
		< COIL >	
L1	1-410-973-11	INDUCTOR 22uH	
L40	1-410-973-11	INDUCTOR 22uH	
L300	1-411-670-21	COIL, CHOKE 400uH	
L401	1-410-967-11	INDUCTOR 2.2uH	
L601	1-410-973-11	INDUCTOR 22uH	
L701	1-410-973-11	INDUCTOR 22uH	
		< TRANSISTOR >	
Q101	8-729-400-56	TRANSISTOR 2SD1328-T	
Q102	8-729-400-56	TRANSISTOR 2SD1328-T	
Q103	8-729-400-56	TRANSISTOR 2SD1328-T	
Q104	8-729-400-56	TRANSISTOR 2SD1328-T	
Q201	8-729-400-56	TRANSISTOR 2SD1328-T	

MAIN

Ref. No	Part No.	Description	Remark
Q202	8-729-400-56	TRANSISTOR 2SD1328-T	
Q203	8-729-400-56	TRANSISTOR 2SD1328-T	
Q204	8-729-400-56	TRANSISTOR 2SD1328-T	
Q301	8-729-020-67	TRANSISTOR XN1A312-TX	
Q303	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q304	8-729-421-22	TRANSISTOR UN2211	
Q451	8-729-807-12	TRANSISTOR 2SD1802-S	
Q453	8-729-019-00	TRANSISTOR 2SD2394-G	
Q454	8-729-020-67	TRANSISTOR XN1A312-TX	
Q455	8-729-106-60	TRANSISTOR 2SB1115A	
Q456	8-729-421-22	TRANSISTOR UN2211	
Q557	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q700	8-729-421-22	TRANSISTOR UN2211	
Q701	8-729-424-18	TRANSISTOR UN2113-TX	
Q751	8-729-402-13	TRANSISTOR XN1501	
Q752	8-729-424-08	TRANSISTOR UN2111	
Q801	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q900	8-729-421-22	TRANSISTOR UN2211	
Q901	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q902	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q903	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q951	8-729-020-67	TRANSISTOR XN1A312-TX	
Q952	8-729-019-00	TRANSISTOR 2SD2394-G	
Q953	8-729-106-68	TRANSISTOR 2SD1615A-GP	
Q954	8-729-020-67	TRANSISTOR XN1A312-TX	
Q957	8-729-024-31	TRANSISTOR XN1111-TX	

< RESISTOR >

R2	1-216-833-11	METAL CHIP	10K	5%	1/16W
R4	1-216-025-00	METAL GLAZE	100	5%	1/10W
R7	1-216-037-00	METAL CHIP	330	5%	1/10W
R8	1-216-073-00	METAL CHIP	10K	5%	1/10W
R9	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R11	1-216-837-11	METAL CHIP	22K	5%	1/16W
R12	1-216-835-11	METAL CHIP	15K	5%	1/16W
R14	1-216-073-00	METAL CHIP	10K	5%	1/10W
R16	1-216-057-00	METAL CHIP	2 2K	5%	1/10W
R17	1-216-025-00	METAL GLAZE	100	5%	1/10W
R18	1-216-809-11	METAL CHIP	100	5%	1/16W
R19	1-216-061-00	METAL CHIP	3 3K	5%	1/10W
R20	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R54	1-216-081-00	METAL CHIP	22K	5%	1/10W
R62	1-216-077-00	METAL CHIP	15K	5%	1/10W
R64	1-216-081-00	METAL CHIP	22K	5%	1/10W
R70	1-216-081-00	METAL CHIP	22K	5%	1/10W
R71	1-216-081-00	METAL CHIP	22K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R100	1-216-238-00	METAL GLAZE	47K	5%	1/8W

Ref No	Part No	Description			Remark
R103	1-216-073-00	METAL CHIP	10K	5%	1/10W
R104	1-216-073-00	METAL CHIP	10K	5%	1/10W
R109	1-216-033-00	METAL CHIP	220	5%	1/10W
R110	1-216-033-00	METAL CHIP	220	5%	1/10W
R112	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R113	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R121	1-216-085-00	METAL CHIP	33K	5%	1/10W
R122	1-216-085-00	METAL CHIP	33K	5%	1/10W
R127	1-216-134-00	METAL CHIP	2 2	5%	1/8W
R128	1-216-134-00	METAL CHIP	2 2	5%	1/8W
R129	1-216-134-00	METAL CHIP	2 2	5%	1/8W
R130	1-216-134-00	METAL CHIP	2 2	5%	1/8W
R154	1-216-081-00	METAL CHIP	22K	5%	1/10W
R155	1-216-837-11	METAL CHIP	22K	5%	1/16W
R160	1-216-671-11	METAL CHIP	6.8K	0 5%	1/10W
R161	1-208-518-41	METAL GLAZE	22K	2%	1/10W
R170	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R171	1-216-671-11	METAL CHIP	6 8K	0 5%	1/10W
R200	1-216-238-00	METAL GLAZE	47K	5%	1/8W
R203	1-216-073-00	METAL CHIP	10K	5%	1/10W
R204	1-216-073-00	METAL CHIP	10K	5%	1/10W
R209	1-216-033-00	METAL CHIP	220	5%	1/10W
R210	1-216-033-00	METAL CHIP	220	5%	1/10W
R212	1-216-081-00	METAL CHIP	22K	5%	1/10W
R213	1-216-081-00	METAL CHIP	22K	5%	1/10W
R221	1-216-085-00	METAL CHIP	33K	5%	1/10W
R222	1-216-085-00	METAL CHIP	33K	5%	1/10W
R227	1-216-134-00	METAL CHIP	2 2	5%	1/8W
R228	1-216-134-00	METAL CHIP	2 2	5%	1/8W
R229	1-216-134-00	METAL CHIP	2 2	5%	1/8W
R230	1-216-134-00	METAL CHIP	2 2	5%	1/8W
R254	1-216-081-00	METAL CHIP	22K	5%	1/10W
R255	1-216-837-11	METAL CHIP	22K	5%	1/16W
R260	1-216-671-11	METAL CHIP	6 8K	0 5%	1/10W
R261	1-208-518-41	METAL GLAZE	22K	2%	1/10W
R270	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R271	1-216-671-11	METAL CHIP	6 8K	0.5%	1/10W
R301	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R302	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R303	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R305	1-216-073-00	METAL CHIP	10K	5%	1/10W
R306	1-216-829-11	METAL CHIP	4 7K	5%	1/16W
R333	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R334	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R335	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R338	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R401	1-216-210-00	METAL GLAZE	3 3K	5%	1/8W
R402	1-216-210-00	METAL GLAZE	3 3K	5%	1/8W
R403	1-216-210-00	METAL GLAZE	3 3K	5%	1/8W

Ref. No.	Part No.	Description				Remark
R404	1-216-210-00	METAL GLAZE	3 3K	5%	1/8W	
R405	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W	
R406	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W	
R407	1-216-222-00	METAL GLAZE	10K	5%	1/8W	
R408	1-216-218-00	METAL GLAZE	6.8K	5%	1/8W	
R410	1-216-805-11	METAL CHIP	47	5%	1/16W	
R411	1-216-295-00	CONDUCTOR, CHIP		(2012)		
R412	1-216-033-00	METAL CHIP	220	5%	1/10W	
R413	1-216-037-00	METAL CHIP	330	5%	1/10W	
R415	1-216-119-00	METAL CHIP	820K	5%	1/10W	
R451	1-216-295-00	CONDUCTOR, CHIP		(2012)		
R454	1-216-186-00	METAL GLAZE	330	5%	1/8W	
R455	1-216-057-00	METAL CHIP	2 2K	5%	1/10W	
R456	1-216-057-00	METAL CHIP	2 2K	5%	1/10W	
R457	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R458	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R600	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R602	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R603	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R604	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R605	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R606	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R609	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R610	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R611	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R612	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R615	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R616	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R619	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R620	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R621	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R622	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R623	1-216-065-00	METAL CHIP	4 7K	5%	1/10W	
R625	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R651	1-216-107-00	METAL CHIP	270K	5%	1/10W	
R652	1-216-119-00	METAL CHIP	820K	5%	1/10W	
R653	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R654	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R656	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R700	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R710	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R711	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R712	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R717	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R718	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R721	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R723	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R724	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R725	1-216-849-11	METAL CHIP	220K	5%	1/16W	

Ref No	Part No	Description				Remark
R726	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R727	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R728	1-216-825-11	METAL CHIP	2 2K	5%	1/16W	
R729	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R731	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R751	1-216-238-00	METAL GLAZE	47K	5%	1/8W	
R752	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R753	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R754	1-216-809-11	METAL CHIP	100	5%	1/16W	
R755	1-216-809-11	METAL CHIP	100	5%	1/16W	
R756	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R757	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R758	1-216-238-00	METAL GLAZE	47K	5%	1/8W	
R759	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R771	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R801	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R802	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W	
R803	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R804	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R805	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R806	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R904	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R908	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R909	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R910	1-216-206-00	METAL GLAZE	2 2K	5%	1/8W	
R911	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R912	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R913	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R914	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R915	1-208-462-41	METAL GLAZE	10K	2%	1/10W	
R916	1-208-462-41	METAL GLAZE	10K	2%	1/10W	
R917	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R918	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R919	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R920	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R921	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R922	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R923	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R924	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R925	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R926	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R927	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R928	1-208-462-41	METAL GLAZE	10K	2%	1/10W	
R929	1-208-462-41	METAL GLAZE	10K	2%	1/10W	
R930	1-216-057-00	METAL CHIP	2 2K	5%	1/10W	
R931	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R932	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R933	1-216-065-00	METAL CHIP	4 7K	5%	1/10W	
R950	1-216-033-00	METAL CHIP	220	5%	1/10W	

MAIN **SERVO**

Ref. No	Part No	Description			Remark
R951	1-216-041-00	METAL CHIP	470 5%	1/10W	
R953	1-216-041-00	METAL CHIP	470 5%	1/10W	
R955	1-216-097-00	METAL GLAZE	100K 5%	1/10W	
R956	1-216-097-00	METAL GLAZE	100K 5%	1/10W	
		< NETWORK RESISTER >			
RB101	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
RB201	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
		< SWITCH >			
SW701	1-571-478-11	SWITCH, SLIDE (POWER SELECT)			
SW901	1-571-532-21	SWITCH, TACTILE (RESET)			
		< TUNER >			
TU1	A-3283-029-A	TUNER UNIT (TUX-006/2 (E))			
		< VIBRATOR >			
X1	1-577-126-51	VIBRATOR, CRYSTAL (7 2MHz)			
X401	1-579-280-31	VIBRATOR, CRYSTAL (16 9344MHz)			
X601	1-579-952-21	VIBRATOR, CERAMIC (8MHz)			
X701	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			
X702	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
*	A-3309-717-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-113-642-11	TANTAL. CHIP	47uF	20%	10V
C2	1-115-581-11	TANTAL. CHIP	100uF	20%	16V
C3	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C101	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C102	1-115-581-11	TANTAL. CHIP	100uF	20%	16V
C105	1-115-581-11	TANTAL. CHIP	100uF	20%	16V
C106	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C107	1-115-581-11	TANTAL CHIP	100uF	20%	16V
C108	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C109	1-115-581-11	TANTAL CHIP	100uF	20%	16V
C110	1-163-112-00	CERAMIC CHIP	62PF	5%	50V
C111	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C112	1-164-489-11	CERAMIC CHIP	0 22uF	10%	16V
C113	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C203	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C204	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C205	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C206	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C207	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C208	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C209	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

Ref. No	Part No	Description			Remark
C301	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C303	1-164-336-11	CERAMIC CHIP	0 33uF		25V
C304	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C305	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C306	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C307	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C308	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C309	1-104-760-11	CERAMIC CHIP	0 047uF	10%	50V
C310	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C311	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C312	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C313	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C501	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C502	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C503	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C504	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C505	1-164-182-11	CERAMIC CHIP	0 0033uF	10%	50V
C506	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C507	1-163-011-11	CERAMIC CHIP	0 0015uF	10%	50V
C508	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C509	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C510	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C511	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C513	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C514	1-113-642-11	TANTAL CHIP	47uF	20%	10V
C527	1-113-642-11	TANTAL CHIP	47uF	20%	10V
C601	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C603	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C605	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
		< CONNECTOR >			
CN1	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P			
CN2	1-766-491-11	CONNECTOR, FPC 17P			
CN4	1-770-347-21	CONNECTOR, FPC 6P			
CN5	1-569-775-21	PIN, CONNECTOR 5P			
		< IC >			
IC1	8-752-069-29	IC CXA1791N			
IC2	8-752-374-12	IC CXD2522R-T6			
IC4	8-759-427-15	IC MB814400C-70PFTN			
IC5	8-752-884-77	IC CXP84640-007Q			
IC6	8-759-823-87	IC LB1638M			
IC7	8-759-370-18	IC BA6797FP-E2			
IC501	8-752-378-67	IC CXD2548R			
IC601	8-759-335-52	IC BA6195FP-YT2			

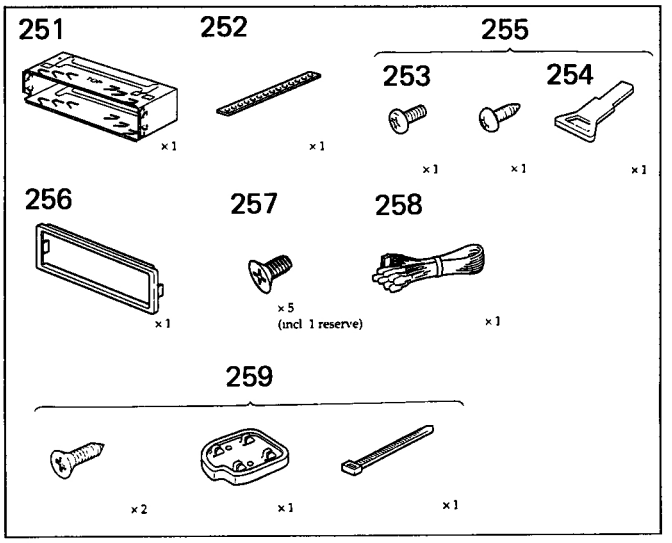
Ref No.	Part No.	Description	Remark
		< COIL >	
L103	1-412-060-11	INDUCTOR CHIP 22uH	
L501	1-412-060-11	INDUCTOR CHIP 22uH	
L503	1-412-060-11	INDUCTOR CHIP 22uH	
		< TRANSISTOR >	
Q1	8-729-901-05	TRANSISTOR DTA124EK	
Q2	8-729-011-95	TRANSISTOR RN-2426	
Q3	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q4	8-729-027-52	TRANSISTOR DTC124EKA-T146	
Q5	8-729-027-52	TRANSISTOR DTC124EKA-T146	
		< RESISTOR >	
R101	1-216-295-00	CONDUCTOR, CHIP (2012)	
R102	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R103	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R104	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R105	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R106	1-216-001-00	METAL CHIP 10 5% 1/10W	
R108	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R109	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R110	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R111	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R112	1-216-065-00	METAL CHIP 4 7K 5% 1/10W	
R113	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R114	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R115	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R140	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R141	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R142	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R143	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R203	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R209	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R210	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R213	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R217	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R218	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R219	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R220	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R221	1-216-864-11	METAL CHIP 0 5% 1/16W	
R223	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R224	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R301	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R302	1-216-037-00	METAL CHIP 330 5% 1/10W	
R303	1-216-308-00	METAL CHIP 4 7 5% 1/10W	
R304	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
R305	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R306	1-216-683-11	METAL CHIP 22K 0 5% 1/10W	

Ref No.	Part No	Description	Remark
R307	1-216-675-11	METAL CHIP 10K 0 5% 1/10W	
R308	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
R309	1-216-675-11	METAL CHIP 10K 0.5% 1/10W	
R310	1-216-683-11	METAL CHIP 22K 0 5% 1/10W	
R311	1-216-675-11	METAL CHIP 10K 0 5% 1/10W	
R312	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R313	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R314	1-216-103-00	METAL CHIP 180K 5% 1/10W	
R315	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R316	1-216-683-11	METAL CHIP 22K 0 5% 1/10W	
R317	1-216-675-11	METAL CHIP 10K 0 5% 1/10W	
R318	1-216-683-11	METAL CHIP 22K 0 5% 1/10W	
R319	1-216-675-11	METAL CHIP 10K 0 5% 1/10W	
R320	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R333	1-216-864-11	METAL CHIP 0 5% 1/16W	
R334	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R501	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R502	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R503	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R504	1-216-061-00	METAL CHIP 3 3K 5% 1/10W	
R505	1-216-061-00	METAL CHIP 3 3K 5% 1/10W	
R506	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R507	1-216-125-00	METAL CHIP 1 5M 5% 1/10W	
R508	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R509	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R510	1-216-061-00	METAL CHIP 3 3K 5% 1/10W	
R511	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R519	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R524	1-216-813-11	METAL CHIP 220 5% 1/16W	
R525	1-216-813-11	METAL CHIP 220 5% 1/16W	
R526	1-216-813-11	METAL CHIP 220 5% 1/16W	
R527	1-216-813-11	METAL CHIP 220 5% 1/16W	
R528	1-216-296-00	CONDUCTOR, CHIP (3216)	
R529	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R530	1-216-295-00	CONDUCTOR, CHIP (2012)	
R531	1-216-065-00	METAL CHIP 4 7K 5% 1/10W	
R532	1-216-829-11	METAL CHIP 4 7K 5% 1/16W	
R533	1-216-065-00	METAL CHIP 4 7K 5% 1/10W	
R552	1-216-809-11	METAL CHIP 100 5% 1/16W	
R553	1-216-809-11	METAL CHIP 100 5% 1/16W	
R554	1-216-809-11	METAL CHIP 100 5% 1/16W	
R555	1-216-809-11	METAL CHIP 100 5% 1/16W	
R601	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R602	1-216-295-00	CONDUCTOR, CHIP (2012)	
R603	1-216-687-11	METAL CHIP 33K 0 5% 1/10W	
R604	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R605	1-216-081-00	METAL CHIP 22K 5% 1/10W	

SERVO **SUB**

Ref. No.	Part No.	Description	Remark
		< VIBRATOR >	
X1	1-760-365-11	VIBRATOR, CERAMIC (10MHz)	
**********			
*	1-659-834-11	SUB BOARD	
		**********	
		< CONNECTOR >	
CN1	1-770-347-21	CONNECTOR, FPC 6P	
**********			
		MISCELLANEOUS	
		**********	
15	1-776-207-11	CORD (WITH CONNECTOR) (POWER)	
⚠210	8-848-402-02	PICK-UP, OPTICAL KSS-520A/J2NP	
F301	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
M901	X-3373-096-1	MOTOR ASSY (SPINDLE)	
M902	A-3301-107-A	MOTOR ASSY, SLED	
M903	A-3291-676-A	MOTOR SUB ASSY, LOADING	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-473-067-31	REMOTE COMMANDER (RM-X2S)	
	3-859-509-11	MANUAL, INSTRUCTION (ENGLISH)	
	3-859-514-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH)	
	X-3373-617-1	CASE ASSY	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-791-09	SCREW +PTT 2 6X5 (S)	
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#3	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#4	7-621-772-10	SCREW +B 2X4	
#5	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
#6	7-627-850-28	SCREW, PRECISION +P 1.4X3	
#7	7-628-253-00	SCREW +PS 2X4	
#8	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
#9	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3	
#10	7-627-000-00	SCREW, PRECISION +P1.7X2 2 TYPE3	
#11	7-628-253-15	SCREW +PS 2X5	
**********			

Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTIONS	
**********			
251	3-009-613-21	FRAME	
252	3-914-406-01	SUPPORT (ND), FITTING	
253	7-682-560-04	SCREW +P 4X6	
254	3-388-078-01	KEY	
255	X-3370-076-1	SCREW ASSY (U KEY), FITTING	
256	3-932-910-01	COLLAR (CDX)	
257	X-3371-913-1	SCREW ASSY (J)	
258	1-776-207-11	CORD (WITH CONNECTOR) (POWER)	
259	X-3369-817-1	BRACKET ASSY (RM-X2S)	



The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

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CDX-C660

SONY

US Model

SERVICE MANUAL

SUPPLEMENT-1

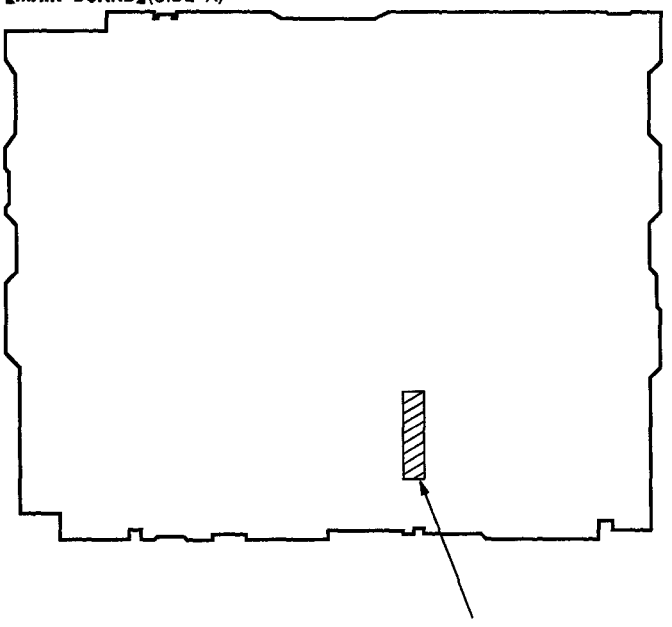
File this supplement with the service manual.

Subject : Change the Main Board and Schematic Diagram

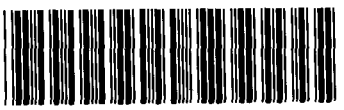
(ENG-97019)

When performing service and inspection, check the suffix of the part number of the main board.

[MAIN BOARD](SIDE A)



Main Board Part No.
Former : 1-665-235-11
New : 1-665-235-12



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9-925-571-81

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MAIN

1. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example:
  uA.. : μA.. uPA.. : μPA..
  uPB.. : μPB.. uPC.. : μPC.. uPD.. : μPD..
- CAPACITORS
  uF : μF
- COILS
  uH : μH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3294-252-A	MAIN BOARD, COMPLETE			
		**********			
*	3-008-663-11	HEAT SINK			
*	3-008-665-01	BRACKET (IC)			
*	3-010-436-01	BRACKET (H)			
*	3-014-349-01	HEAT SINK (REG 3)			
	7-685-792-09	SCREW +PTT 2 6X6 (S)			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
		< BUZZER >			
BZ700	1-504-920-11	BUZZER			
		< CAPACITOR >			
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
C4	1-124-589-11	ELECT	47uF	20%	16V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C7	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C8	1-136-153-00	FILM	0.01uF	5%	50V
C9	1-130-475-00	MYLAR	0.0022uF	5%	50V
C10	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C11	1-136-173-00	FILM	0.47uF	5%	50V
C12	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C13	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C14	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C15	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C17	1-124-589-11	ELECT	47uF	20%	16V
C18	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C19	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C20	1-126-933-11	ELECT	100uF	20%	10V
C21	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C22	1-126-933-11	ELECT	100uF	20%	10V
C23	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C24	1-126-933-11	ELECT	100uF	20%	10V
C25	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C32	1-164-346-11	CERAMIC CHIP	1uF		16V
C33	1-124-589-11	ELECT	47uF	20%	16V
C37	1-163-213-00	CERAMIC CHIP	0.0022uF	5%	50V
C40	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C41	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C42	1-124-589-11	ELECT	47uF	20%	16V
C51	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C52	1-164-299-11	CERAMIC CHIP	0 22uF	10%	25V
C53	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C55	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C59	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C63	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C65	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C69	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C102	1-115-664-11	ELECT	2.2uF	20%	50V
C105	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C106	1-135-179-21	TANTAL. CHIP	2.2uF	20%	16V
C107	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C108	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C109	1-104-946-11	ELECT	10uF	20%	35V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-104-946-11	ELECT	10uF	20%	35V
C112	1-164-489-11	CERAMIC CHIP	0 22uF	10%	16V
C113	1-104-946-11	ELECT	10uF	20%	35V
C114	1-104-946-11	ELECT	10uF	20%	35V
C122	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C123	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C126	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C127	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C128	1-104-563-11	FILM CHIP	0 1uF	5%	16V
C129	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C130	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C131	1-163-009-11	CERAMIC CHIP	0 001uF	10%	50V
C132	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C192	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C202	1-115-664-11	ELECT	2.2uF	20%	50V
C205	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C206	1-135-179-21	TANTAL. CHIP	2 2uF	20%	16V
C207	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C208	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C209	1-104-946-11	ELECT	10uF	20%	35V
C210	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C211	1-104-946-11	ELECT	10uF	20%	35V
C212	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V

Ref. No.	Part No.	Description			Remark
C213	1-115-655-11	ELECT	10uF	20%	35V
C214	1-115-655-11	ELECT	10uF	20%	35V
C222	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C223	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C226	1-104-563-11	FILM CHIP	0 1uF	5%	16V
C227	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C228	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C229	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C230	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C231	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C232	1-163-009-11	CERAMIC CHIP	0 001uF	10%	50V
C293	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C301	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C302	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C303	1-104-955-11	ELECT	100uF	20%	10V
C304	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C305	1-104-955-11	ELECT	100uF	20%	10V
C306	1-115-648-11	ELECT	22uF	20%	16V
C307	1-164-346-11	CERAMIC CHIP	1uF		16V
C312	1-126-163-11	ELECT	4.7uF	20%	50V
C313	1-104-943-11	ELECT	2 2uF	20%	50V
C314	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C318	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C320	1-164-232-11	CERAMIC CHIP	0 01uF		50V
C321	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C322	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C324	1-115-469-21	ELECT	4700uF	20%	16V
C331	1-104-955-11	ELECT	100uF	20%	10V
C333	1-117-757-11	ELECT	100uF	20%	25V
C350	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C351	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C399	1-164-346-11	CERAMIC CHIP	1uF		16V
C402	1-115-648-11	ELECT	22uF	20%	16V
C404	1-115-648-11	ELECT	22uF	20%	16V
C405	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C406	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C407	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C408	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C409	1-115-655-11	ELECT	10uF	20%	35V
C410	1-115-655-11	ELECT	10uF	20%	35V
C411	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C412	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C413	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C414	1-163-215-00	CERAMIC CHIP	0.0027uF	5%	50V
C415	1-163-193-00	CERAMIC CHIP	330PF	5%	50V
C416	1-163-215-00	CERAMIC CHIP	0.0027uF	5%	50V
C417	1-163-193-00	CERAMIC CHIP	330PF	5%	50V
C418	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C419	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V

Ref. No	Part No.	Description			Remark
C420	1-115-655-11	ELECT	10uF	20%	35V
C424	1-115-666-11	ELECT	4.7uF	20%	50V
C425	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C451	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C452	1-115-651-11	ELECT	100uF	20%	16V
C453	1-115-651-11	ELECT	100uF	20%	16V
C454	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C455	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C458	1-104-955-11	ELECT	100uF	20%	10V
C601	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C602	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C603	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C607	1-126-154-11	ELECT	47uF	20%	6.3V
C608	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C610	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C701	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C702	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C703	1-126-154-11	ELECT	47uF	20%	6.3V
C704	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C705	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C706	1-163-037-11	CERAMIC CHIP	0 022uF	10%	25V
C707	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C708	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C709	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C710	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C751	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C752	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C770	1-164-505-11	CERAMIC CHIP	2 2uF		16V
C771	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C801	1-126-163-11	ELECT	4.7uF	20%	50V
C901	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C902	1-126-157-11	ELECT	10uF	20%	16V
C903	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C904	1-126-157-11	ELECT	10uF	20%	16V
C905	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C906	1-126-157-11	ELECT	10uF	20%	16V
C907	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C910	1-126-163-11	ELECT	4.7uF	20%	50V
C911	1-164-346-11	CERAMIC CHIP	1uF		16V
C912	1-125-701-11	DOUBLE LAYERS	0.047F		5.5V
C913	1-126-933-11	ELECT	100uF	20%	10V
C914	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C915	1-163-038-00	CERAMIC CHIP	0 1uF		25V
C952	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
C953	1-164-004-11	CERAMIC CHIP	0 1uF	10%	25V
		< JACK >			
CNJ502	1-764-808-14	JACK (ANTENNA)			
CNJ901	1-764-270-21	JACK (REMOTE IN)			

MAIN

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CNP301	1-774-701-11	PIN, CONNECTOR 16P	
CNP302	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN, LINE OUT FRONT/REAR)	
CNP504	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P	
CNP751	1-580-907-31	PLUG, CONNECTOR 8P (BUS CONTROL IN)	
CNP901	1-764-422-11	PLUG, CONNECTOR 12P	
		< DISCHARGE GAP >	
CP1	1-519-504-11	GAP, DISCHARGE	
		< DIODE >	
D1	8-719-981-59	DIODE FC805	
D3	8-719-977-03	DIODE DTZ5.6B	
D301	8-719-421-24	DIODE MA8039-H	
D302	8-719-421-24	DIODE MA8039-H	
D305	8-719-404-49	DIODE MA111	
D306	8-719-404-49	DIODE MA111	
D307	8-719-404-49	DIODE MA111	
D308	8-719-977-12	DIODE DTZ6 8B	
D310	8-719-049-38	DIODE 1N5404TU	
D311	8-719-053-18	DIODE 1SR154-400TE-25	
D314	8-719-404-49	DIODE MA111	
D321	8-719-421-24	DIODE MA8039-H	
D322	8-719-421-24	DIODE MA8039-H	
D451	8-719-110-03	DIODE RD7.5ESB2	
D452	8-719-977-03	DIODE DTZ5.6B	
D601	8-719-404-49	DIODE MA111	
D701	8-719-404-49	DIODE MA111	
D702	8-719-914-44	DIODE DAP202K	
D703	8-719-914-44	DIODE DAP202K	
D751	8-719-914-43	DIODE DAN202K	
D752	8-719-422-64	DIODE MA8062-M	
D753	8-719-017-98	DIODE MA8200-TX	
D754	8-719-977-12	DIODE DTZ6 8B	
D755	8-719-017-98	DIODE MA8200-TX	
D801	8-719-801-78	DIODE 1SS184	
D802	8-719-977-12	DIODE DTZ6.8B	
D901	8-719-977-12	DIODE DTZ6.8B	
D902	8-719-801-78	DIODE 1SS184	
D904	8-719-977-12	DIODE DTZ6.8B	
D905	8-719-914-44	DIODE DAP202K	
D906	8-719-977-12	DIODE DTZ6.8B	
D907	8-719-977-12	DIODE DTZ6.8B	
D908	8-719-977-12	DIODE DTZ6 8B	
D909	8-719-977-12	DIODE DTZ6 8B	
D910	8-719-977-12	DIODE DTZ6.8B	
D911	8-719-034-74	DIODE MA4120-M(TA)	
D912	8-719-109-97	DIODE RD6.8ES-B2	
D914	8-719-109-97	DIODE RD6.8ES-B2	
D915	8-719-109-97	DIODE RD6.8ES-B2	
D916	8-719-404-49	DIODE MA111	
D920	8-719-053-18	DIODE 1SR154-400TE-25	
D921	8-719-053-18	DIODE 1SR154-400TE-25	
D922	8-719-022-90	DIODE MA8160M	
D925	8-719-404-49	DIODE MA111	
D931	8-719-977-12	DIODE DTZ6.8B	
D932	8-719-977-12	DIODE DTZ6.8B	
D951	8-719-914-44	DIODE DAP202K	
D952	8-719-423-23	DIODE MA8110-M	
D953	8-719-423-32	DIODE MA8120-M	
D954	8-719-914-43	DIODE DAN202K	
D955	8-719-404-49	DIODE MA111	
		< FUSE >	
F301	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
		< IC >	
IC201	8-759-711-82	IC NJM4580E	
IC301	8-752-078-67	IC CXA1946BQ-T6	
IC304	8-759-448-61	IC HA13156	
IC401	8-759-185-27	IC PCM1710U-A	
IC402	8-759-700-94	IC NJM5532M	
IC455	8-759-711-58	IC NJM78L05UA	
IC601	8-759-470-01	IC MN1883220Y5A1	
IC602	8-759-448-86	IC TB2114FN(EL)	
IC701	8-759-457-28	IC uPD78058GC-453-3B9	
IC751	8-759-449-89	IC BA8270F-E2	
IC901	8-759-347-50	IC BA3918-V3	
IC902	8-759-443-41	IC RH5VL40AA-T1C	
IC903	8-759-344-91	IC RN5VD23AA-TL	
		< JUMPER RESISTOR >	
JC51	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC52	1-216-864-11	METAL CHIP 0 5%	1/16W
JC61	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC62	1-216-864-11	METAL CHIP 0 5%	1/16W
JC70	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC101	1-216-296-00	CONDUCTOR, CHIP (3216)	
JC102	1-216-296-00	CONDUCTOR, CHIP (3216)	
JC103	1-216-864-11	METAL CHIP 0 5%	1/16W
JC104	1-216-864-11	METAL CHIP 0 5%	1/16W
JC105	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC106	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC201	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC202	1-216-296-00	CONDUCTOR, CHIP (3216)	
JC203	1-216-295-00	CONDUCTOR, CHIP (2012)	

Ref No	Part No	Description		Remark
JC204	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC205	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC206	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC301	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC302	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC306	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC401	1-216-296-00	CONDUCTOR, CHIP	(3216)	
JC601	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC651	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JC701	1-216-295-00	CONDUCTOR, CHIP	(2012)	
		< COIL >		
L1	1-410-973-11	INDUCTOR 22uH		
L40	1-410-973-11	INDUCTOR 22uH		
L300	1-411-670-21	COIL, CHOKE 400uH		
L401	1-410-967-11	INDUCTOR 2 2uH		
L601	1-410-973-11	INDUCTOR 22uH		
L701	1-410-973-11	INDUCTOR 22uH		
		< TRANSISTOR >		
Q101	8-729-400-56	TRANSISTOR 2SD1328-T		
Q102	8-729-400-56	TRANSISTOR 2SD1328-T		
Q103	8-729-400-56	TRANSISTOR 2SD1328-T		
Q104	8-729-400-56	TRANSISTOR 2SD1328-T		
Q201	8-729-400-56	TRANSISTOR 2SD1328-T		
Q202	8-729-400-56	TRANSISTOR 2SD1328-T		
Q203	8-729-400-56	TRANSISTOR 2SD1328-T		
Q204	8-729-400-56	TRANSISTOR 2SD1328-T		
Q301	8-729-020-67	TRANSISTOR XN1A312-TX		
Q303	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		
Q304	8-729-421-22	TRANSISTOR UN2211		
Q451	8-729-807-12	TRANSISTOR 2SD1802-S		
Q452	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q453	8-729-019-00	TRANSISTOR 2SD2394-G		
Q454	8-729-020-67	TRANSISTOR XN1A312-TX		
Q455	8-729-106-60	TRANSISTOR 2SB1115A		
Q456	8-729-421-22	TRANSISTOR UN2211		
Q557	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q700	8-729-421-22	TRANSISTOR UN2211		
Q701	8-729-424-18	TRANSISTOR UN2113-TX		
Q751	8-729-402-13	TRANSISTOR XN1501		
Q752	8-729-424-08	TRANSISTOR UN2111		
Q801	8-729-422-27	TRANSISTOR 2SD601A-Q		
Q900	8-729-421-22	TRANSISTOR UN2211		
Q901	8-729-422-27	TRANSISTOR 2SD601A-Q		
Q902	8-729-422-27	TRANSISTOR 2SD601A-Q		
Q903	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		
Q951	8-729-020-67	TRANSISTOR XN1A312-TX		
Q952	8-729-019-00	TRANSISTOR 2SD2394-G		

Ref No	Part No	Description				Remark
Q953	8-729-106-68	TRANSISTOR 2SD1615A-GP				
Q954	8-729-020-67	TRANSISTOR XN1A312-TX				
Q957	8-729-024-31	TRANSISTOR XN1111-TX				
		< RESISTOR >				
R2	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R4	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R7	1-216-037-00	METAL CHIP	330	5%	1/10W	
R8	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R9	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R11	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R12	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R14	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R16	1-216-057-00	METAL CHIP	2 2K	5%	1/10W	
R17	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R18	1-216-809-11	METAL CHIP	100	5%	1/16W	
R19	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R20	1-216-861-11	METAL CHIP	2.2M	5%	1/16W	
R54	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R62	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R64	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R70	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R71	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R100	1-216-238-00	METAL GLAZE	47K	2%	1/8W	
R103	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R104	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R109	1-216-033-00	METAL CHIP	220	5%	1/10W	
R110	1-216-033-00	METAL CHIP	220	5%	1/10W	
R112	1-216-230-00	METAL GLAZE	22K	5%	1/8W	
R113	1-216-230-00	METAL GLAZE	22K	5%	1/8W	
R121	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R122	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R127	1-216-134-00	METAL CHIP	2 2	5%	1/8W	
R128	1-216-134-00	METAL CHIP	2 2	5%	1/8W	
R129	1-216-134-00	METAL CHIP	2 2	5%	1/8W	
R130	1-216-134-00	METAL CHIP	2 2	5%	1/8W	
R154	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R155	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R160	1-216-671-11	METAL CHIP	6 8K	0 5%	1/10W	
R161	1-208-518-41	METAL GLAZE	22K	2%	1/10W	
R170	1-208-462-41	METAL GLAZE	10K	2%	1/10W	
R171	1-216-671-11	METAL CHIP	6 8K	0.5%	1/10W	
R200	1-216-238-00	METAL GLAZE	47K	2%	1/8W	
R203	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R204	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R209	1-216-033-00	METAL CHIP	220	5%	1/10W	
R210	1-216-033-00	METAL CHIP	220	5%	1/10W	
R212	1-216-081-00	METAL CHIP	22K	5%	1/10W	

MAIN

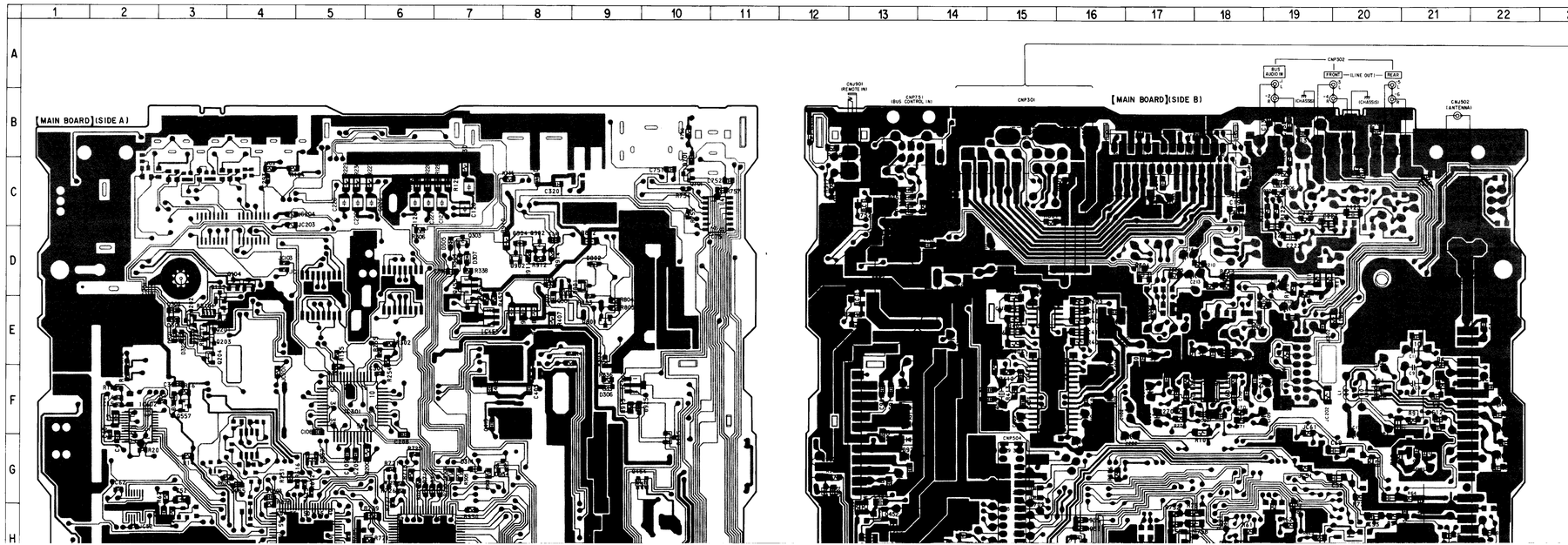
Ref. No.	Part No.	Description			Remark
R213	1-216-081-00	METAL CHIP	22K	5%	1/10W
R221	1-216-085-00	METAL CHIP	33K	5%	1/10W
R222	1-216-085-00	METAL CHIP	33K	5%	1/10W
R227	1-216-134-00	METAL CHIP	2 2	5%	1/8W
R228	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R229	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R230	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R254	1-216-081-00	METAL CHIP	22K	5%	1/10W
R255	1-216-837-11	METAL CHIP	22K	5%	1/16W
R260	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R261	1-208-518-41	METAL GLAZE	22K	2%	1/10W
R270	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R271	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R301	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R302	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R303	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R304	1-216-849-11	METAL CHIP	220K	5%	1/16W
R305	1-216-073-00	METAL CHIP	10K	5%	1/10W
R306	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R334	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R335	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R336	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R338	1-216-836-11	METAL CHIP	18K	5%	1/16W
R401	1-216-210-00	METAL GLAZE	3.3K	2%	1/8W
R402	1-216-210-00	METAL GLAZE	3.3K	2%	1/8W
R403	1-216-210-00	METAL GLAZE	3 3K	2%	1/8W
R404	1-216-210-00	METAL GLAZE	3.3K	2%	1/8W
R405	1-216-210-00	METAL GLAZE	3.3K	2%	1/8W
R406	1-216-210-00	METAL GLAZE	3.3K	2%	1/8W
R407	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R408	1-216-218-00	METAL GLAZE	6.8K	5%	1/8W
R410	1-216-805-11	METAL CHIP	47	5%	1/16W
R411	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R412	1-216-033-00	METAL CHIP	220	5%	1/10W
R413	1-216-037-00	METAL CHIP	330	5%	1/10W
R415	1-216-119-00	METAL CHIP	820K	5%	1/10W
R451	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R452	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R453	1-216-198-00	METAL GLAZE	1K	5%	1/8W
R454	1-216-186-00	METAL GLAZE	330	5%	1/8W
R455	1-216-057-00	METAL CHIP	2 2K	5%	1/10W
R456	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R457	1-216-073-00	METAL CHIP	10K	5%	1/10W
R458	1-216-073-00	METAL CHIP	10K	5%	1/10W
R600	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R602	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R603	1-216-845-11	METAL CHIP	100K	5%	1/16W
R604	1-216-833-11	METAL CHIP	10K	5%	1/16W
R605	1-216-841-11	METAL CHIP	47K	5%	1/16W
R606	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R609	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R610	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R611	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R612	1-216-845-11	METAL CHIP	100K	5%	1/16W
R615	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R616	1-216-845-11	METAL CHIP	100K	5%	1/16W
R619	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R620	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R621	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R622	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R623	1-216-065-00	METAL CHIP	4 7K	5%	1/10W
R625	1-216-845-11	METAL CHIP	100K	5%	1/16W
R651	1-216-107-00	METAL CHIP	270K	5%	1/10W
R652	1-216-119-00	METAL CHIP	820K	5%	1/10W
R653	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R654	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R656	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R700	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R710	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R711	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R712	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R717	1-216-849-11	METAL CHIP	220K	5%	1/16W
R718	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R721	1-216-841-11	METAL CHIP	47K	5%	1/16W
R723	1-216-849-11	METAL CHIP	220K	5%	1/16W
R724	1-216-851-11	METAL CHIP	330K	5%	1/16W
R725	1-216-849-11	METAL CHIP	220K	5%	1/16W
R726	1-216-849-11	METAL CHIP	220K	5%	1/16W
R727	1-216-849-11	METAL CHIP	220K	5%	1/16W
R728	1-216-825-11	METAL CHIP	2 2K	5%	1/16W
R729	1-216-174-00	METAL GLAZE	100	5%	1/8W
R731	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R751	1-216-238-00	METAL GLAZE	47K	5%	1/8W
R752	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R753	1-216-073-00	METAL CHIP	10K	5%	1/10W
R754	1-216-809-11	METAL CHIP	100	5%	1/16W
R755	1-216-809-11	METAL CHIP	100	5%	1/16W
R756	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R757	1-216-017-00	METAL GLAZE	47	5%	1/10W
R758	1-216-238-00	METAL GLAZE	47K	5%	1/8W
R759	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R771	1-216-113-00	METAL CHIP	470K	5%	1/10W
R801	1-216-073-00	METAL CHIP	10K	5%	1/10W
R802	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W
R803	1-216-841-11	METAL CHIP	47K	5%	1/16W
R804	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R805	1-216-083-00	METAL CHIP	27K	5%	1/10W
R806	1-216-097-00	METAL GLAZE	100K	5%	1/10W

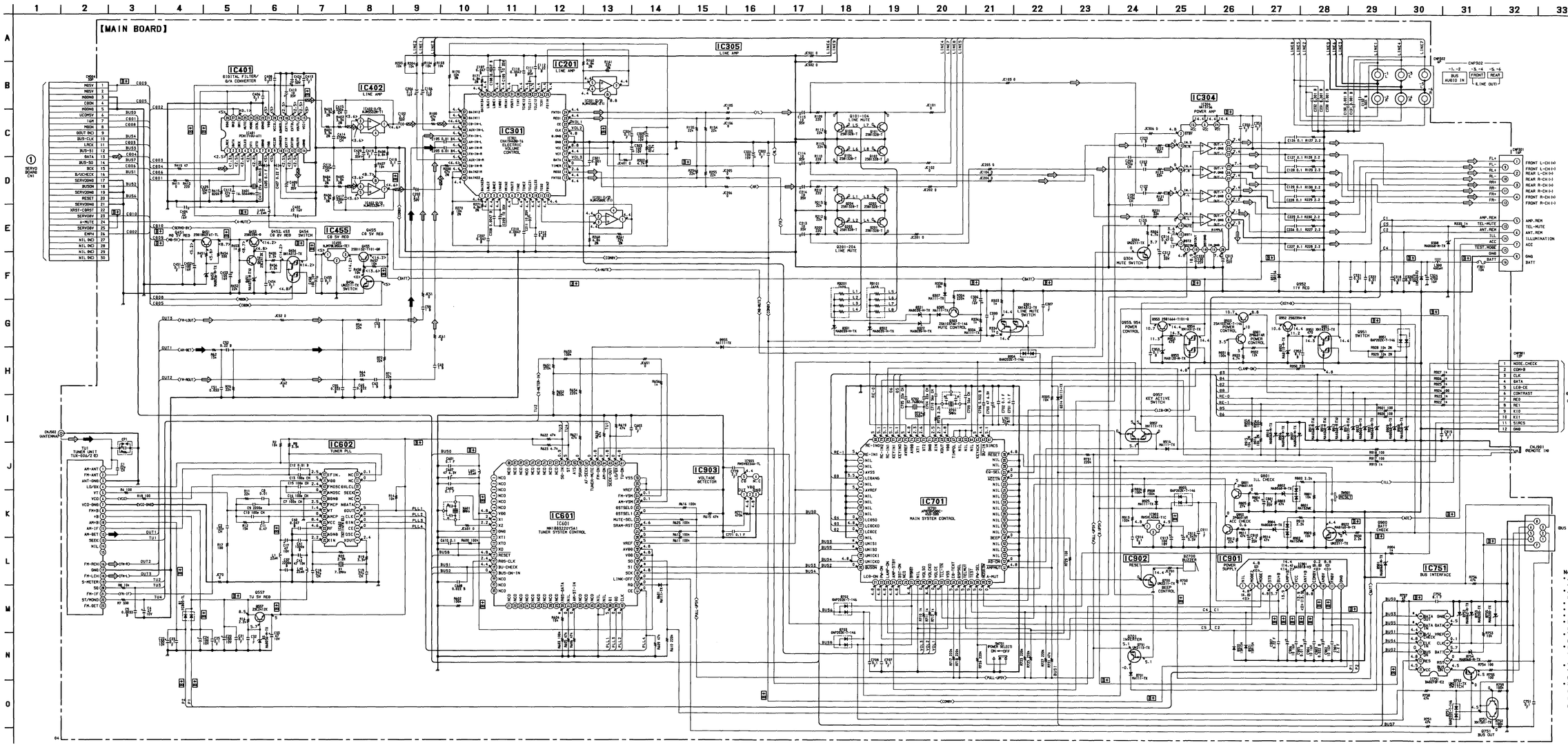
Ref. No.	Part No	Description			Remark
R904	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R908	1-216-845-11	METAL CHIP	100K	5%	1/16W
R909	1-216-073-00	METAL CHIP	10K	5%	1/10W
R910	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W
R911	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R912	1-216-081-00	METAL CHIP	22K	5%	1/10W
R913	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R914	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R915	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R916	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R917	1-216-025-00	METAL GLAZE	100	5%	1/10W
R918	1-216-025-00	METAL GLAZE	100	5%	1/10W
R919	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R920	1-216-025-00	METAL GLAZE	100	5%	1/10W
R921	1-216-025-00	METAL GLAZE	100	5%	1/10W
R922	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R923	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R924	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R925	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R926	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R927	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R928	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R929	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R930	1-216-057-00	METAL CHIP	2 2K	5%	1/10W
R931	1-216-845-11	METAL CHIP	100K	5%	1/16W
R932	1-216-075-00	METAL CHIP	12K	5%	1/10W
R933	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R950	1-216-033-00	METAL CHIP	220	5%	1/10W
R951	1-216-041-00	METAL CHIP	470	5%	1/10W
R953	1-216-041-00	METAL CHIP	470	5%	1/10W
R955	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R956	1-216-097-00	METAL GLAZE	100K	5%	1/10W
		< NETWORK RESISTOR >			
RB101	1-233-412-11	RES, CHIP NETWORK 1KX4		(3216)	
RB201	1-233-412-11	RES, CHIP NETWORK 1KX4		(3216)	
		< SWITCH >			
SW701	1-571-478-11	SWITCH, SLIDE (POWER SELECT)			
SW901	1-692-431-21	SWITCH, TACTILE (RESET)			
		< TUNER >			
TU1	A-3283-029-A	TUNER UNIT (TUX-006/2(E))			
		< VIBRATOR >			
X1	1-577-126-51	VIBRATOR, CRYSTAL (7.2MHz)			
X401	1-579-280-31	VIBRATOR, CRYSTAL (16.9344MHz)			
X601	1-579-952-21	VIBRATOR, CERAMIC (8MHz)			
X701	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			
X702	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			

2. PRINTED WIRING BOARD — MAIN SECTION —

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	F-20	D954	G-7
D3	F-3	D955	G-4
D301	E-3		
D302	E-3	IC201	F-18
D305	D-7	IC301	F-5
D306	F-9	IC304	B-17
D307	F-9	IC401	F-15
D308	C-8	IC402	E-15
D310	D-14	IC455	E-7
D311	C-17	IC601	H-5
D314	G-7	IC602	F-2
D321	E-3	IC701	H-6
D322	E-3	IC751	C-11
D451	H-13	IC901	F-13
D452	H-14	IC902	F-9
D601	H-18	IC903	H-6
D701	C-10		
D702	G-15	Q101	E-3
D703	I-18	Q102	D-4
D751	H-17	Q103	D-3
D752	C-13	Q104	D-4
D753	C-13	Q201	E-3
D754	C-13	Q202	E-3
D755	C-13	Q203	E-3
D801	D-9	Q204	E-3
D802	D-9	Q301	D-8
D901	I-16	Q303	F-9
D902	D-8	Q304	D-17
D904	D-8	Q451	H-14
D905	G-10	Q452	H-13
D906	B-12	Q453	I-13
D907	C-12	Q454	G-9
D908	I-13	Q455	D-7
D909	J-13	Q456	E-7
D910	I-13	Q557	F-3
D911	J-16	Q700	J-6
D912	J-15	Q701	C-10
D914	J-15	Q751	H-17
D915	J-15	Q752	C-13
D916	I-16	Q801	E-9
D920	G-13	Q900	E-13
D921	F-13	Q901	I-8
D922	E-13	Q902	D-8
D925	F-9	Q903	I-8
D931	I-7	Q951	I-13
D932	I-7	Q952	G-12
D951	H-16	Q953	I-9
D952	G-12	Q954	I-8




【MAIN BOARD】
IC305
LINE AMP
IC401
8 BIT DIGITAL FILTER/ D/A CONVERTER
IC201
LINE AMP
IC402
LINE AMP
IC301
CXA2500N-T6
ELECTRIC VOLUME CONTROL
IC304
POWER AMP
IC455
IC602
TUNER PLL
IC601
MN188322QY5A1
TUNER SYSTEM CONTROL
IC903
VOLTAGE DETECTOR
IC701
MAIN SYSTEM CONTROL
IC902
RESET
IC901
POWER SUPPLY
IC751
BUS INTERFACE
CNP502
BUS AUDIO IN
FRONT
REAR
(LINE OUT)
CNP302
FRONT L-CH (+)
FRONT L-CH (-)
REAR L-CH (+)
REAR R-CH (-)
REAR R-CH (+)
FRONT R-CH (-)
AMP. REM
TEL-MUTE
ANT. REM
ILLUMINATION
ACC
GND
BATT
CNP901
NOSE. CHECK
COM-B
CLK
DATA
LCB-CE
CONTRAST
RES
RE1
K10
K11
S1RCS
GND
CNP751
BUS CONTROL IN
CNJ901
REMOTE IN
CNJ902
ANTENNA
TU1
TUNER UNIT TUX-006Z*2 KD
Q551
Q552
Q553
Q554
Q555
Q556
Q557
Q558
Q559
Q560
Q561
Q562
Q563
Q564
Q565
Q566
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